SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Draft Staff Report
Proposed Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools

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EXECUTIVE SUMMARY

Introduction

Proposed Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools, is a new rule that will apply to new or relocated facilities emitting toxic air contaminants. The proposed rule will also apply to future modifications at the facilities. Proposed Rule 1401.1 is designed to be more health protective for school children by establishing more stringent risk requirements for new and relocated facilities emitting toxic air contaminants locating near schools, thereby reducing the exposure of toxic emissions on school children. Over the past few years the AQMD staff has spent thousands of staff hours responding to parents and community groups regarding issues of toxic-emitting facilities which are located near schools. Proposed Rule 1401.1 is preventative in nature and will provide a greater assurance that a toxic-emitting facility locating near a school meets stricter toxic risk requirements.

Cumulative Impacts White Paper

Proposed Rule 1401.1 is based on one of the strategies of the "Potential Control Strategies to Address Cumulative Impacts from Air Pollution," white paper (White Paper) which was approved by the Governing Board in September 2003. The original concept was to amend Rule 1401 – New Source Review of Toxic Air Contaminants to make the risk requirements more stringent for new or relocated facilities near existing schools and possibly other sensitive receptors. At the time the White Paper was approved, the Board approved a two-step hearing process to first identify key policy issues and seek direction prior to the rule adoption hearing.

Existing Regulations

AQMD Rules 1401 and 1402 are the two primary toxic rules for new and existing facilities. Rule 1401 – New Source Review for Toxic Air Contaminants is a permit unit-based rule that applies to any increase in toxic emissions from new, relocated, or modified equipment. Among other requirements, it specifies that cancer risk for the subject equipment may not exceed one in one million, or if Best Available Control Technology (T-BACT) is used, the cancer risk may not exceed ten in one million per equipment. The rule also contains limits for non-cancer acute and chronic health impacts. Rule 1402 – Control of Toxic Air Contaminants from Existing Sources applies to facilities and establishes a facility-wide action risk threshold of 25 in one million. Facilities must implement risk reduction measures to endeavor to reduce their risks below 25 in one million. Facilities must reduce their risk below 100 in one million. Rule 1402 also contains limits for facility-wide acute and chronic health impacts.

Public Noticing Requirements

Rule 212 – Standards for Approving Permits requires public noticing for permitting of new, relocated, and modified equipment that results in any increase in air pollutants, whether toxic or

non-toxic, if the permit unit is near a school. For schools, public notice is triggered when the permit unit is within 1,000 feet of the outer boundary of the school.

Public Process

During development of the 2003 White Paper, a Cumulative Impacts Working Group met several times to provide input on the strategies. A working group for Proposed Rule 1401.1 was formed and met five times throughout the rulemaking process. In maintaining the intent of a two-step process, as part of the first step, the AQMD staff prepared a concept paper, "More Stringent Risk Requirements for New or Relocated Facilities Near Schools" (Appendix B) that was presented to the Governing Board on November 5, 2004 and released for a 60-day public review and comment period. Staff also presented the rule concepts at numerous AQMD advisory group and committee meetings and heard additional comments. Staff returned to the Governing Board for a pre-hearing on the proposal on May 6, 2005 and was directed by the Board to proceed with rule development for Proposed Rule 1401.1. A Public Workshop was on held July 6, 2005. Comments received throughout the rulemaking process are summarized in Appendix A along with staff's responses.

Key Issues

Following the May 6, 2005 pre-hearing for Proposed Rule 1401.1, the following two key issues remained: (1) the appropriate distance criteria for the rule and (2) socioeconomic and land use considerations, particularly in regard to relocations.

The distance from the toxic source to the outer boundary of the school was a recurring issue during rule development. Comments included that the distance should be consistent with other regulations and based on science. The Cumulative Impacts White Paper originally suggested 100 meters (328 feet). Other regulations specify additional requirements for facilities that are located from 300 to 1,000 feet from an existing school. The risk from stationary sources is reduced by approximately 90 percent at 300 to 500 feet from the source. When considering the distance issue, it is important to note that current Rule 1401 allows up to ten in one million Maximum Individual Cancer Risk (MICR) for each piece of equipment at a facility if it is equipped with T-BACT. Thus, a facility with multiple pieces of equipment could have a facility-wide cancer risk greater than ten in one million. If the MICR for a facility is greater than ten in one million, it is possible that a school further than 500 feet away could experience a cancer risk greater than one million under the proposed rule. This is considered unlikely because of the source categories identified in the analysis of the past six year permitting data. The most likely facilities to site near schools, based on the data, either have only one permit unit or typically accept an MICR limit of one in one million to avoid adding T-BACT. Most of the facilities were gasoline stations or autobody spray booths. Gasoline stations have a single permit and are limited to ten in one million MICR by Rule 1401. Owners of spray booths typically have only one permitted equipment and opt for a permit condition limiting MICR to one in one million. In the unlikely event that any new or relocated facility results in greater than one in one million cancer risk at a school between 500 and 1,000 feet, the rule requires the cancer risk to be added to public notices

required under Rule 212 as a further deterrent to siting of facilities with greater than one in one million risk at schools.

Throughout the rule development process the issue of land use decisions and socioeconomic impacts was raised. The issue of relocations, particularly those that come about because of eminent domain, redevelopment, or loss of a lease, has also been discussed. Further analysis of permitting data indicated that out of about 100 facilities with toxic emissions that sited near schools over the past six years, only nine were relocations and only two of the nine had a cancer risk of greater than one in one million. Based on the historical permitting data, few facilities are expected to relocate near schools. Some stakeholders have commented that in well-developed urban areas a relocated facility may have limited siting choices. In view of the special circumstances faced by relocated facilities, the rule requirements for relocations differ from those for new facilities.

During the pre-hearing several issues were raised by representatives of small business, including:

- Opposition to Proposed Rule 1401.1 because there is allegedly no scientific data or measurable benefit to support the basis that the rule is needed or that the proposed rule would protect school children from the harmful effects of air pollution;
- Arguments that printing industry is not a high toxic emitter and current rules exist to regulate location and relocation of toxic components, and stationary source businesses are not the real culprits;
- Urged AQMD to consider an initiative that would relocate drop off points at schools as an alternative solution that would not turn businesses away from communities that need jobs;
- Suggested that a program to retrofit existing air conditioning systems at high risk schools be developed to improve and enhance the indoor environment and reduce school children's exposure to harmful emissions, and that school districts be prohibited from locating in close proximity to existing emitting businesses; and
- Expressed concern about the potential impact and financial burden Proposed Rule 1401.1 would have on existing sources and hundreds of companies.

Responses to each of these concerns are contained in Attachment A.

Proposed Rule 1401.1

Proposed Rule 1401.1 specifies facility-wide limits for cancer risk and non-cancer acute and chronic hazard indices at schools for new and relocated facilities within 500 feet of a school or school under construction. Under certain scenarios the risk requirements would affect new facilities within 1,000 feet of a school or school under construction. The proposed rule also requires additional information for those public notices that are currently required under Rule 212 – Standards for Approving Permits for some new or relocated facilities near existing schools.

Key elements of the rule include:

- Purpose
- Applicability
- Definitions
- Risk Requirements for New Facilities
- Risk Requirements for Relocated Facilities
- Requirements for New or Relocated Facilities for Additional Information in Rule 212 Notices
- Requirements for New or Relocated Faculties for Modification, Alteration, and Change of Condition
- Exemptions
- Tables Summarizing the Rule Requirements for New and Relocated Facilities

For new facilities, the proposed rule requires the facility-wide cancer risk to be less than one in one million and the facility-wide chronic and acute hazard indices for any target organ to be less than 1.0 at any school or school under construction within 500 feet of the facility. If there are no schools within 500 feet, the same risk levels must be met at any school or school under construction within 500 to 1,000 feet unless there is a residential or sensitive receptor within 150 feet of the facility. If there is a residential or sensitive receptor within 150 feet, the facility does not have to calculate risk at the school because Rule 1401 limits the risk at the receptor and risk reduces significantly due to dilution over the distance to the school. The risk limits apply only for the schools that were in existence or under construction at the time the new facility's first application was deemed complete.

For relocated facilities, the proposed rule provides two compliance options. Under Proposed Rule 1401.1, if a facility is relocating, the facility must demonstrate, for each school or school under construction within 500 feet of the facility, that either: 1) the risk at the school from the facility in its new location is no greater than the risk at that same school when the facility was at its previous location, or 2) the facility-wide cancer risk at the school does not exceed one in one million and the facility-wide acute and chronic hazard indices at the school do not exceed 1.0 for any target organ. The risk limits apply only for the schools that were in existence or under construction at the time the relocated facility's first application was deemed complete.

The proposed rule requires additional information for those public notices that are currently required under Rule 212 – Standards for Approving Permits for new or relocated facilities within 1,000 feet of an existing school if the cancer risk at the school exceeds one in one million. It is also important to note that once a facility is determined to be subject to Proposed Rule 1401.1, it is always required to comply with the risk thresholds for all subsequent applications at the schools originally identified for its first application.

The proposed rule contains six equipment exemptions and an exemption to clarify that a facility is only subject to the risk requirements for schools at the time the facility first locates. The exemptions are proposed because the equipment is subject to requirements of other rules, is control equipment used to clean up contamination, is temporary in nature, and/or does not require an AQMD permit. They include:

- Emergency internal combustion engines that are exempted under Rule 1304;
- Engines subject to Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion Engines and Other Compression Ignition Engines;
- Equipment permitted solely for in-situ remediation of contaminated soil and/or groundwater at an existing or former gasoline dispensing or dry cleaning facility;
- Equipment permitted for use at various locations throughout the District and does not remain at one site for more than twelve consecutive months;
- Experimental research operations permitted under Rule 441 – Research Operations that are limited to one year or less in duration; and
- Equipment exempt from a written permit under Rule 219 – Equipment not Requiring a Written Permit Pursuant to Regulation II.

Proposed Rule 1401.1 also contains an exemption for facilities that states that a new or relocated facility is not required to calculate risk for any school which was constructed after the facility has its first application deemed complete nor is it required to add risk information to Rule 212 notices for such schools. This exemption is included so that facilities are not impacted by schools which site nearby after they are in operation, only those which were there at the time they first apply for permits.

Impact Assessment

Based on an evaluation of historical permitting data for the past six years, the concept paper concluded that approximately 97 percent of all new facilities during that time were located more than 1,000 feet from the outer boundary of an existing school. Out of about 12,000 new or relocated facilities, only sixteen were found within 1,000 feet of a school that had a calculated facility-wide cancer risk of between one and ten in one million. Relocation impacts are also expected to be small. Based on historical data, the impacts to facilities of the proposed rule are expected to be minimal. However, the proposed rule provides greater health protection for school children. The proposed rule is also a better utilization of AQMD resources in that it is a proactive and preventative, rather than reactive, approach to the issues of toxic-emitting facilities siting near schools.

CHAPTER 1 - INTRODUCTION

Introduction

Proposed Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools, is designed to be more health protective for school children by addressing toxics impacts from new or relocated facilities that site near schools. The proposal will make the risk requirements more stringent for new and relocated toxic-emitting facilities locating near schools, thereby reducing the exposure of toxic emissions on school children. Over the past few years the AQMD staff has spent thousands of staff hours responding to parents and community groups regarding issues of toxic-emitting facilities which are located near schools. Proposed Rule 1401.1 is preventative in nature and will provide a greater assurance that a toxic-emitting facility locating near a school meets stricter cancer and non-cancer risk requirements.

Existing Regulations

Rule 1401 – New Source Review of Toxic Air Contaminants

AQMD Rule 1401 specifies limits for cancer and non-cancer health risks for new, modified, or relocated equipment which emits toxic air contaminants. The rule applies to the increase in risk from any new, modified, or relocated permit unit and requires that the following criteria are met before an AQMD permit is issued:

1. Increase in maximum individual cancer risk (MICR) is less than or equal to one in one million if Best Available Control for Toxics is not used or ten in one million if T-BACT is used;
2. Increase in Cancer Burden is less than or equal to 0.5;
3. Increase in Chronic Hazard Index is less than or equal to 1.0; and
4. Increase in Acute Hazard Index is less than or equal to 1.0.

The current rule requirements do not distinguish between facilities near sensitive receptors and other types of receptors. Sensitive receptors include schools (kindergarten through grade 12), licensed daycare centers, hospitals, and convalescent homes. Rule 1401 does distinguish between residential and worker receptors in the lifetime exposure assumptions for risk calculations, but risk criteria are the same for all receptors.

There are several exemptions listed in Rule 1401. Some exemptions concern situations such as change of ownership, modification with no increase in risk, and functionally identical replacement. Others are for certain types of equipment or processes such as emergency internal combustion engines. The rule considers only the increase in emissions from the new or modified permit unit. It is important to note that Rule 1401 applies to individual pieces of equipment, not to the entire facility. For example, a facility can have multiple permitted pieces of equipment, each permitted at a risk of 10 in one million if the equipment is equipped with T-BACT. Rule 1402 – Control of Toxic Air Contaminants from Existing Sources, on the other hand, applies to facilities and considers the risk from all sources at a facility, including unpermitted sources.

Rule 212 – Standards for Approving Permits and Issuing Public Notice

Rule 212 contains public notification requirements for new, modified, or relocated sources of air contaminants. For a facility located within 1,000 feet from the outer boundary of a school that has a new, modified, or relocated permit unit that causes an increase in emissions of any toxic or non-toxic air contaminant, Rule 212 requires public notice. Noticing is not required if there is a reduction of emissions and no increase in health risk at any receptor location. Under Rule 212, one noticing trigger is the distance from the emission source to the outer boundary of the school. The noticing requirement includes distribution of the notice to all addresses within 1,000 feet of the outer boundary of the facility and to all parents or guardians of children attending any school within a one-quarter mile radius of the property line of the facility with the new or modified equipment.

Rule 1402 – Control of Toxic Air Contaminants from Existing Sources

Rule 1402 is a facility-based rule and applies to facilities subject to the Air Toxics Hot Spots Act (AB2588) or those that exceed the significant (100 in one million) or action (25 in one million) risk levels in the rule. Typically, this includes any facility exceeding a cancer risk of 25 in one million or a hazard index of 3.0. The requirements of the rule vary depending on the facility-wide risk level and range from submission of inventory to public noticing to full health risk assessment and risk reduction. Table 1 shows the applicability of Rules 1401 and 1402 as compared to Proposed Rule 1401.1.

Table 1
Applicability of Toxics Rules

Applicability	R1401	R1402	PR1401.1
New Source Review for Toxics	Yes	---	Yes
Equipment-based	Yes	---	---
Existing Sources	---	Yes	---
Facility-based	---	Yes	Yes

Cumulative Impacts White Paper

On September 5, 2003 the AQMD Governing Board approved a white paper, "Potential Control Strategies to Address Cumulative Impacts from Air Pollution". The White Paper contained recommendations for numerous strategies to reduce cumulative impacts. One of the strategies, Strategy 2, was a proposal to look into amending Rule 1401 – New Source Review of Toxic Air Contaminants to make the risk requirements more stringent for new or relocated facilities near

existing schools and possibly other sensitive receptors. At the September 2003 meeting, the AQMD Governing Board also approved a two-step hearing process for Strategy 2 to first identify key policy issues and seek direction prior to the rule adoption hearing.

Public Process

During development of the 2003 White Paper, a Cumulative Impacts Working Group met several times to provide input on the strategies. A working group for Proposed Rule 1401.1 was subsequently formed and met five times. The working group was composed of representatives from environmental and community groups, schools, the business community, and AQMD staff. The working group first met on December 11, 2003 to discuss Strategy 2. Topics of discussion included the effective distance from the school for risk analysis, duration of exposure, economic and development issues, non-permitted sources of pollutants, new schools located in industrial areas, and identification of other sensitive receptors.

In maintaining the intent of a two-step process, as part of the first step AQMD staff prepared a concept paper, "More Stringent Risk Requirements for New or Relocated Facilities Near Schools". The concept paper was presented to the Governing Board on November 5, 2004 and released for a 60-day public review and comment period which ended January 4, 2005. Four comment letters were received, representing eleven organizations. Staff also presented the rule concepts at numerous AQMD working group and committee meetings and heard additional comments.

A second meeting of the Proposed Rule 1401.1 Working Group was held on October 26, 2004 to discuss the concept paper prior to its release at the November 5, 2004 Governing Board meeting. The working group met a third time on February 17, 2005 to discuss key issues prior to the Pre-Hearing for the proposal.

Staff returned to the Governing Board for a pre-hearing on the proposal on May 6, 2005 and was directed by the Board to proceed with rule development for Proposed Rule 1401.1. During the pre-hearing, community, environmental, and business representatives testified. The key issues discussed at the pre-hearing included the need for a rule, the appropriate distance from the source to the school, socioeconomic issues, and the concern that the more stringent requirements for new or relocated facilities would set a precedent for future requirements for existing facilities. The environmental and community organizations were generally in support of proceeding with the proposed rule. Some small business representatives questioned the need for a rule because: 1) other non-stationary sources, such as freeways, pose a greater risk than new stationary sources, and 2) recent permit data indicated most new and relocated facilities already site away from schools. Other business representatives, however, supported the rule development but requested that the distance for Proposed Rule 1401.1 be consistent with the initial recommendation in the White Paper of 100 meters (328 feet). The staff presentation included several examples of programs and regulations that are addressing risk from non-stationary sources and pointed out that Proposed Rule 1401.1 would be one more way to address toxic risk for school children in a proactive way. Staff also assured the business community that Proposed Rule 1401.1 would not

automatically mean that a similar rule would be developed for existing stationary sources. The Governing Board directed staff to proceed with rule development and continue working with all stakeholders on the appropriate distance and the socioeconomic impacts of relocations, for the proposed rule.

The Proposed Rule 1401.1 Working Group met on June 8, 2005 to present rule concepts and on August 3, 2005 to discuss remaining issues prior to the Public Hearing. A Public Workshop was held on July 6, 2005 followed by a comment period ending July 20, 2005. Responses to comments received throughout the rulemaking process can be found in Appendix A. The following is a summary of remaining key issues.

- Buffer Zone vs. Risk Assessment
- 70 Year Exposure Assumption for Schools
- Business Competitiveness
- Distance Criteria Based on the Cumulative Impacts White Paper (300 feet)
- Socioeconomic Issues

Buffer zone vs. Risk Assessment

The environmental and community groups have expressed the concern that risk assessment, especially for children, may not adequately assess risks to children because children's breathing rates are more rapid than adults, children are more susceptible to multiple pathway effects of toxics, and the cumulative and synergistic effects of toxics have been underestimated. In addition, the environmental and community groups have commented that most of the studies on which health risk are based were on healthy adult males rather than children. Therefore, the environmental and community groups have commented that they believe a better approach to Proposed Rule 1401.1 would be to establish a 1,000 foot buffer zone around existing schools and no new or relocated toxic-emitting facility would be allowed within the buffer zone.

The approach to the Proposed Rule 1401.1, like all other AQMD toxic rules, is risk-based. The objective of the rule is to minimize toxic exposure for school children. This is accomplished by limiting risk from a new facility to nearby schools to not exceed one in one million cancer risk and 1.0 hazard indices. Relocated facilities may meet these risk levels or, alternatively, not create any greater risk than the risk from their previous location. A buffer zone would preclude the siting of any facility emitting even a de minimus level of toxics from siting within a 1,000 of a school, and could, therefore unduly limit siting options for new and relocated facilities.

70 Year Exposure Assumption for Schools

Representatives of the business community commented that school children who attend a school for four to five years are not exposed to the toxic emissions of nearby facilities over a 70-year lifetime. They also commented that OEHHA and CalEPA recommend using a shorter exposure time for children.

AQMD's "Risk Assessment Procedures for Rules 1401 and 212" are based on the guidelines developed by Cal EPA's Office of Environmental Health Hazard Assessment for the Air Toxics

Hot Spots Program. Both documents recommend using a 70-year exposure duration for sensitive receptors, including school children. In addition, OEHHA's "Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments" recommends using a 70-year exposure duration for risk management decisions. Therefore, the 70-year exposure is consistent with current AQMD risk assessment procedures as well as state guidelines.

Business Competitiveness

Representatives of the business community also commented that the proposed rule would possibly result in economic disadvantages and less competition because new and relocated facilities would have to meet more stringent standards than existing businesses in the same area. The new or relocated facilities might, therefore, choose to locate elsewhere leaving less competition in the community. Environmental and community groups believe that the requirements for new and relocated facilities should be the same.

Proposed Rule 1401.1 is not expected to have a large impact on business competitiveness. The impacts of the rule based on historic permitting data are expected to be minimal. Results of data analysis indicate that only a few facilities per year will be impacted by the rule. Affected facilities may choose to meet the risk thresholds of the rule if they wish to site near a school, or they may opt to locate further from the school and meet current new source toxics requirements. The risk requirements for Proposed Rule 1401.1 differ from those for new facilities because these are businesses already operating in a community and, typically, they prefer to relocate in the same community where they have an established customer base. The requirements for relocations recognize the socioeconomic and siting options for established businesses that may need to move due to eminent domain or loss of a lease. This issue is discussed further in the Socioeconomic Analysis in Chapter 3.

Distance Criteria Based on the Cumulative Impacts White Paper (300 feet)

Another concern raised by some representatives in the business community was the distance criteria for Proposed Rule 1401.1. The distance suggested by the 2003 Cumulative Impacts White Paper was 100 meters or approximately 300 feet whereas the rule criteria is 500 feet. The business community felt this issue had been thoroughly discussed and settled by the Cumulative Impacts Working Group.

The Cumulative Impacts White Paper was a policy level document rather than actual rulemaking. During the rulemaking process for Proposed Rule 1401.1, the distance issue was studied in more detail and it was determined that a 500 foot radius around the facility would be more appropriate based on the dilution of risk from stationary sources over distance which drops off by approximately 90% by 300 to 500 feet, depending upon the type of source.

Socioeconomic issues and land use decisions, particularly for relocations

Throughout the rule development process the issue of land use decisions and socioeconomic impacts has been raised. The issue of relocations, particularly those that come about because of eminent domain, redevelopment, or loss of a lease, has also been discussed. Further analysis of

permitting data indicated that out of about 100 facilities with toxic emissions that sited near schools over the past six years, only two were relocations with a cancer risk of greater than one in one million. Based on the historical permitting data, few facilities are expected to relocate near schools. Staff recognizes that as the population in the District grows, however, there will be fewer options for new sites. In view of the special circumstances faced by relocated facilities, the rule requirements for relocations differ from those for new facilities.

An additional comment regarding the socioeconomic impacts of the proposed rule was that the rule should only apply to parcels of land which have been purchased by the facility owner after the rule goes into effect. That would mean that an owner who has already purchased a parcel of land for a specific purpose will not have its value reduced as a result of the proposed rule. This issue has been addressed in the proposed rule by allowing additional time for facilities which have already purchased or leased land to submit applications for Permit to Construct/Operate within 90 days after rule adoption (see clause (c)(2)(6) of the proposed rule). For very long range projects, the facility should contact the local school district prior to siting the project to determine if schools will be built nearby in the future. Please refer to the Socioeconomic Analysis in Chapter 3 of this Staff Report for additional discussion.

CHAPTER 2 – PROPOSED RULE

Introduction

This chapter includes a description of the various sections of the proposed rule, explains the rule requirements, and lists the exemptions.

Proposed Rule 1401.1

Purpose

The purpose of Proposed Rule 1401.1 is to provide additional health protection to children at schools or schools under construction from new or relocated facilities emitting toxic air contaminants.

Applicability

The proposed rule applies to any facility which is new or relocated, sites near a school, and emits toxics air contaminants listed in Table I of Rule 1401 – New Source Review for Toxic Air Contaminants. Any new or relocated facility that is subject to Proposed Rule 1401.1 must comply with the risk thresholds for all subsequent permit applications.

The proposed rule does not apply to existing facilities or any subsequent change of ownership or modification at existing facilities. An existing facility is defined as a facility with equipment that requires a Permit to Operate that is in operation or has its application for Permit to Construct/Operate deemed complete prior to 90 days after the date of rule adoption. Therefore, owners of property which has been purchased or leased at the time the rule is adopted have additional time to file applications for permits. A modification is defined as any physical change in, change in method of operation, or addition to an existing permit unit that requires an application for a Permit to Construct/Operate not including routine maintenance or repair. The definition contains clarifications as to what constitutes a modification and is consistent with other AQMD rules.

Definitions

The proposed rule contains definitions for several terms. Definitions are discussed as they occur in each rule section. The terms defined in Proposed Rule 1401.1 include:

- Cancer Risk;
- Existing Facility;
- Facility;
- Facility-wide Acute Hazard Index;
- Facility-wide Cancer Risk;
- Facility-wide Chronic Hazard Index;
- Individual Substance Acute Hazard Index;

- Individual Substance Chronic Hazard Index;
- Modification;
- New Facility;
- Permit Unit;
- Relocated Facility;
- School-; and
- School under Construction.

Risk Requirements

The proposed rule specifies facility-wide limits for cancer risk, and non-cancer acute and chronic hazard indices for new and relocated facilities within 500 feet of a school or school under construction. Under certain scenarios, the risk requirements of the proposed rule would apply to new facilities located within 1,000 feet of a school or school under construction. A school is defined as any public or private school, including juvenile detention facilities with classrooms, used for purposes of the education of more than 12 children at the school, including kindergarten and grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes. The term includes any building or structure, playground, athletic field, or other area of school property, but does not include unimproved school property. Unimproved property is any property on which there are no buildings or play areas and where it can reasonably be expected that no children will be present. The requirement for more than 12 children applies to the entire school, not each class.

A school under construction, for the purpose of the proposed rule, is any property on which construction of a school has commenced and the District has been notified of such construction. The effective date for the school is the date construction began or the date notification is received by the AQMD, whichever is later. Commencement of construction is any physical indication at the building site that the school will be built on the property. For example, this could mean demolition of old buildings or groundbreaking on a vacant property.

Risk Calculations for Schools

The risk definitions for cancer risk and hazard indices are similar to the definitions in Rule 1401, with the exception that the risk levels are facility-based in Proposed Rule 1401.1 rather than equipment-based as in Rule 1401. Rule 1401 also only considers maximum individual cancer risk and acute and chronic health impacts at the nearest worker or residential receptor, whereas Proposed Rule 1401.1 calculates the risk at the school. Cancer risk is defined as the estimated probability of an exposed individual contracting cancer as a result of exposure to toxic air contaminants at a school or a school under construction assuming a duration of 70 years. Non-cancer health risks are expressed as acute and chronic hazard indices and are calculated for each affected organ or system in the body, including the cardiovascular and blood systems, central and peripheral nervous systems, eyes, immune system, kidneys, gastrointestinal system, liver, respiratory system, skin, and reproductive and developmental impacts. All risk calculations are

performed according the AQMD's "Risk Assessment Procedures for Rules 1401 and 212" and are based on the list of toxic compounds in Table 1 of Rule 1401. The risk assessment guidelines contain definitions of the worker, residential, and sensitive receptor locations. Sensitive receptors include schools, hospitals, convalescent homes, day care centers, and other locations where children, chronically ill individuals, or other sensitive persons could be exposed to toxic emissions. The risk assessment guidelines specify that for residential and sensitive receptors, which includes schools, the risk exposure is a 70-year lifetime exposure. They describe how to determine the distance from a point or volume source to the receptor location and provide the methodology for risk analysis. Chronic and acute hazard indices are calculated for substances having a non-cancer health impacts.

The risk assessment procedures for Proposed Rule 1401.1 are the same as those used for risk assessment for all other AQMD rules and programs. Subdivision (d) of the proposed rule states "For the purpose of this rule, the cancer risk and hazard indices shall be calculated pursuant to Rule 1401 and the applicable risk assessment procedures." These procedures are based on the guidelines developed by Cal EPA's Office of Environmental Health Hazard Assessment (OEHHA) for the Air Toxics Hot Spots Program. The use of a 70-year lifespan for sensitive receptors such as schools is consistent with AQMD's "Risk Assessment Procedures for Rules 1401 and 212" and OEHHA's recommendation that a 70-year exposure duration be used for risk management decisions (page 8-4 of "Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments"). AQMD's CEQA guidelines also consider schools as sensitive receptors and a 70 year exposure is used for all sensitive receptors.

The CalEPA "Guidance for Assessing Exposure and Health Risks at Existing and Proposed School Sites" provides a procedure to calculate risks on a year by year basis for toxic chemicals found as contaminants at existing and proposed school sites. This document, however, does not provide guidance or recommendations for exposure periods regarding risk management decisions. A representative of OEHHA, confirmed to the AQMD Health Effects Officer that using the procedures in the hot spots guidance document and the 70 year exposure period for risk management decisions is consistent with OEHHA guidelines. The OEHHA representative also stated that the school risk assessment guidelines were developed specifically for toxics on site, and were not designed to assess facility emissions. Thus, the procedures as applied in this proposed rule are fully consistent with the CalEPA guidelines regarding risk assessment and risk management decisions.

Facility-wide risk values are the sum of the risk values for all the permit units at the facility. A permit unit is defined as any article, machine, equipment, or other contrivance, or combination thereof, which may cause or control the issuance of air contaminants, and which requires a written permit pursuant to Rules 201 and/or 203. The definition is identical to that in Rule 1401. For the purpose of this staff report, the term "source" refers to a permit unit. Proposed Rule 1401.1 uses AQMD's "Risk Assessment Procedures for Rules 1401 and 212" for calculating risk. Consistent with these guidelines, in determining distance for Proposed Rule 1401.1, the distance is measured from the source to the outer boundary of the school. For a point source,

such as a boiler or engine, this means the distance from the exhaust stack to the school fence line. For a volume source such as a service station, this means the distance from the middle of the facility to the school fence line. This approach is consistent with the methodology used for Rules 1401, 1402, and 212.

The risk level requirements for Proposed Rule 1401.1 are based on all equipment at the facility requiring a written permit and do not include equipment at the facility that does not require a written permit pursuant to Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II, including, but not limited to, onsite mobile equipment or portable equipment. Portable equipment registered under CARB's Portable Equipment Registration Program does not require AQMD permits and is, therefore, exempt from the proposed rule. Certain equipment is exempt under the proposed rule because it is exempt from written permits, is regulated under other rules and/or is temporary in nature. The definition for facility is consistent with the definition used for other AQMD rules.

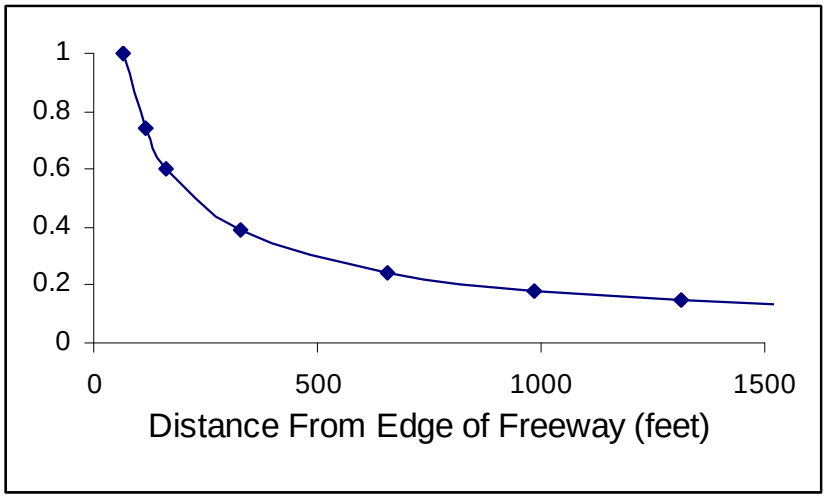
Cancer Risk over Distance

The policy objective for Proposed Rule 1401.1 is to achieve a risk level at schools or schools under construction of no greater than one in one million cancer risk from new facilities. Existing Rule 1401 allows a maximum individual cancer risk of ten in one million at the nearest receptor provided Best Available Control Technology for Toxics is used. In order to streamline permit processing, Proposed Rule 1401.1 relies on dispersion factors established based on past modeling analyses for stationary sources (point or volume sources).

A recent study[1] by the California Office of Environmental Health Hazard Assessment (OEHHA) and the California Department of Health Services noted that the concentration of freeway emissions could impact downwind receptors up to 1,500 feet (460 meters) before diminishing to background levels. Figure 1 shows the relative risk of freeway toxic emissions as a function of downwind distance. The curve shows how relative risk decreases as the distance from the freeway increases. The scale for risk is zero to one, but could represent any set of values. For example, if the cancer risk at the freeway was 500 in one million, it would be reduced by approximately 80 percent to about 100 in one million at 1,000 feet from the freeway. The curve represents only the risk from the freeway without considering background risks levels.

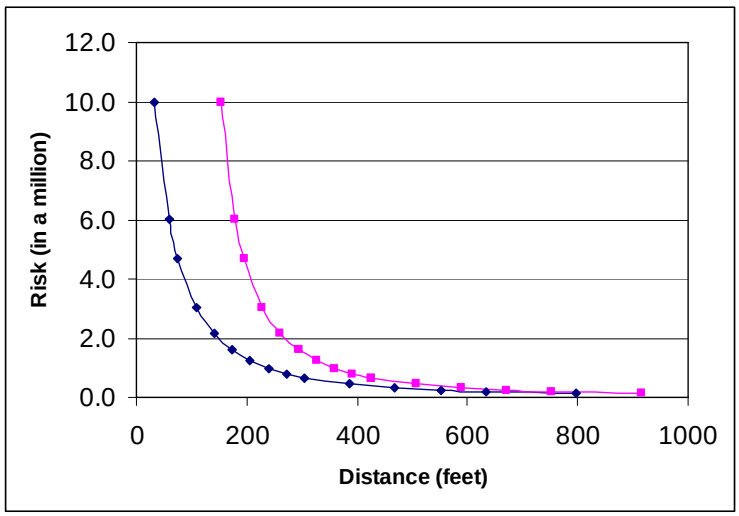
[1] Proximity of California Public Schools to Busy Roads, Environmental Health Perspectives, January 2004.

Figure 1
Relative Cancer Risk from Freeway as a Function of Downwind Distance



In addition, profiles of risk levels from spray booths and service stations show that emissions and risk drops off significantly at about 300 to 500 feet. Figure 2 shows the relative cancer risk from a service station based on distance from a receptor. The first curve shows the decrease in risk over distance for the source. It assumes there is a receptor approximately 30 feet from the emissions source and that receptor is subject to 10 in one million cancer risk. The second curve assumes the nearest receptor is at approximately 150 feet from the source and is subject to ten in one million cancer risk. The figure illustrates that in both cases, the risk drops off to less than one in one million by approximately 350 feet from the source, regardless of whether the first receptor is at 30 feet or 150 feet.

Figure 2
Relative Risk Depending on Distance from Receptor



Note: Service station modeled

Dilution curves for various sources differ somewhat depending upon many variables such as type of source, release height, and exhaust temperature. In addition to evaluating the cancer risk over distance, the AQMD staff also evaluated distances used in other regulatory programs.

Other Regulatory Programs

A review of current source-specific AQMD and CARB toxics regulations found stricter requirements for facilities within 300 to 500 feet of an existing school. It is important to note that some of the distance requirements apply to existing facilities. Table 2 summarizes the distances found in other rules and regulations.

Table 2
Distances from Source to Schools in Other Regulations

Rule	Distance	Requirement
AQMD Rule 212	1,000 feet	Public notice for new, relocated, or modified facility with emission increase
AQMD Rules 1469 & 1469.1	328 feet (100 meters)	More stringent standards for chrome plating & spraying facilities
AQMD Rule 1470	328 - 500 feet	Testing limits and more stringent limits for diesel backup engines
Thermal Spraying ATCM	500 feet (mixed use zoning)	Restricts siting of new thermal spraying facility

The risk requirements of the proposed rule differ for new and relocated facilities in order to recognize the special issues related to relocations.

Risk Requirements for New Facilities

A new facility is defined as a facility or operation that is not an existing or relocated facility. Property which has been purchased or leased prior to date of adoption and for which applications have been submitted and deemed complete within 90 days from the date of adoption of the proposed rule is, therefore, excluded from the definition.

Under Proposed Rule 1401.1, a new facility with a toxic-emitting source requiring a written AQMD permit must demonstrate that their facility-wide cancer risk does not exceed one in one million and non-cancer risks do not exceed 1.0 at any school or school under construction that is located within 500 feet of the new facility. Proposed Rule 1401.1 does not prohibit the siting of new facilities near schools but establishes specific risk requirements. In addition, under Proposed Rule 1401.1, the risk at a receptor other than a school can be greater than one in one million, provided the facility is in compliance with Rule 1401. If the nearest school is within 500 feet of the facility, the facility is not required to evaluate the risk at schools beyond 500 feet.

If there is no school or school under construction within 500 feet of the new facility and there is no residential or sensitive receptor within 150 feet of the facility, the facility needs to demonstrate that its impact on schools (if any) between 500 to 1,000 feet is less than or equal to one in one million for cancer risk and less than 1.0 for non-cancer risks. The purpose of this requirement is to assure that the risk, by the time it reaches any school within 1,000 feet of the facility has been diluted to approximately one in one million cancer risk and non-cancer hazard indices do not exceed 1.0 for any target organ. A residential or sensitive receptor, rather than a worker receptor, is specified because risk assessment for sensitive receptors (including school children) uses a 70-year exposure assumption as is the case for residential receptors. Risk calculations for worker receptors are based on a shorter exposure duration, and, therefore, should not be compared to sensitive receptor risk values.

If there is a residential or sensitive receptor within 150 feet of the emissions source (permit unit), due to the applicable Rule 1401 MICR requirements the risk at the school, another 350 or more feet away, can reasonably be expected to have decreased below one in one million cancer risk at the school. The risk requirements are summarized in Table 3. If the nearest school is between 500 to 1,000 feet and there is a residential or sensitive receptor within 150 feet, Proposed Rule 1401.1 does not require that the risk at the school be demonstrated.

It is possible, since Rule 1401 is equipment-based, that a facility with multiple pieces of equipment could have a facility-wide cancer risk greater than ten in one million. If the MICR for a facility is greater than ten in one million, it is possible that a school further than 500 feet away could experience a cancer risk greater than one million under the proposed rule. This is considered unlikely because of the source categories identified in the analysis of the past six year permitting data. The most likely facilities to site near schools, based on the data, either have only one permit unit or typically accept an MICR limit of one in one million to avoid adding T-BACT. Most of the facilities were gasoline stations or autobody spray booths. Gasoline stations have a single permit and are limited to ten in one million MICR by Rule 1401. Owners of spray booths typically have only one permitted equipment and opt for a permit condition limiting MICR to one in one million. In the unlikely event that any new or relocated facility results in greater than one in one million cancer risk at a school between 500 and 1,000 feet, the rule requires the cancer risk for any school where the cancer risk exceeds one in one million to be added to public notices required under Rule 212 as a further deterrent to siting of facilities with greater than one in one million risk at schools.

The facility-wide risk requirements must be met only for the existing schools and schools under construction at the time the first application for Permit to Construct/Operate was deemed complete for a new facility. These are the only schools considered for any subsequent applications at that facility as well.

Table 3
Risk Requirements for New Facilities

Distance from New Facility to Nearest School	Other Receptor at < 150 ft	*Risk Demo at School at < 500 ft	*Risk Demo at School at 500 – 1,000 ft
< 500 feet	N/A	Yes	N/A
500 – 1,000 ft	Yes	N/A	N/A
500 – 1,000 ft	No	N/A	Yes

*Risk Demonstration at school for New Facility:
≤ 1 in one million cancer risk and hazard indices ≤ 1.0

Risk Requirements for Relocated Facilities

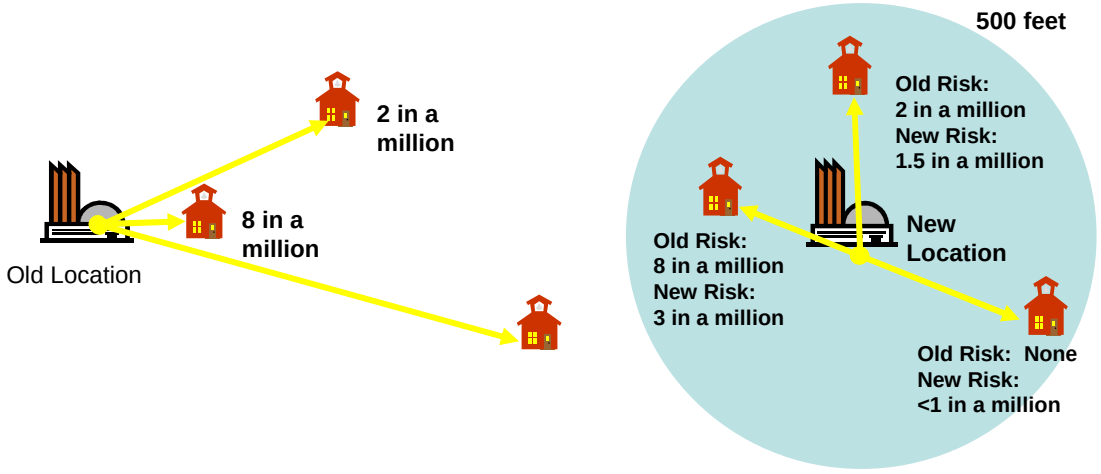
A relocated facility means the removal of all existing permitted equipment from one parcel of land, remaining under the same ownership, and installation of the same equipment or functionally identical replacement of the equipment at another parcel of land where the two parcels are not in actual physical contact and are not separated solely by a public roadway or other public right-of-way. For example, if a facility is located in a strip mall and moves to another part of the strip mall, it is not considered a relocation if the strip mall is one parcel of land as determined by the County Assessor. Facilities sometimes replace existing equipment at the time of relocation with newer, more efficient equipment that serves the same purpose. The definition allows replacement of the existing units with functionally identical equipment in order to encourage this practice because it operates more efficiently and results in equal or less emissions. Relocation of part of the equipment at a facility is excluded since that could possibly mean an expansion of the facility operating in two different locations. The facility may, however, inactive permits on old equipment it no longer intends to use and then move all permitted equipment to a new location and this would be considered a relocation under the definition.

As with new facilities, the facility-wide risk requirements for relocated facilities must be met only for the existing schools and schools under construction at the time the first application for Permit to Construct/Operate was deemed complete for a relocated facility. These are the only schools considered for any subsequent applications at that facility as well.

Relocated facilities are facilities which have been operating at a previous location and chose or are forced to move. These facilities may wish to remain in the neighborhood where they have an established customer base and may, therefore, have fewer siting options than new facilities. The risk requirements for relocated facilities recognize the special circumstances faced by existing businesses that relocate. If a relocated facility is within 500 feet of any school or school under construction, for each school within 500 feet from its new location the facility must demonstrate that either 1) the facility-wide cancer risk and facility-wide non-cancer hazard indices at the new location do not impose a greater risk on the school at the facility's new location than they did at its previous location, or 2) that the facility-wide cancer risk does not exceed one in one million and the acute and chronic hazard indices do not exceed 1.0 for any target organ. For example, if

a facility moved nearby, the risk at all schools within a 500 foot radius of the new location would be calculated (new risk). The new risk would then be compared to the risk at each of the schools from the facility's previous location (old risk). If the new risk at a school is less than or equal to the old risk at that same school, the facility would comply with the Proposed Rule 1401.1 risk requirements ("no net increase" option). If a school within 500 feet of the new location had no risk from the old location, the new risk at that school could not exceed one in one million cancer risk or 1.0 hazard indices. Figure 3 gives an example of the requirements for relocations. For the two schools with a calculated old risk, the facility has demonstrated that the risk at the new location (new risk) is no greater than the risk from the old location. For the school where there was no risk from the previous location, the facility has demonstrated that the risk does not exceed one in one million. Therefore, the facility is in compliance.

Figure 3
Relocation Example



Additional Information in Rule 212 Notices for New and Relocated Facilities

In addition to the risk requirements, Proposed Rule 1401.1 requires additional information to be added to any public notice currently required by Rule 212(c)(1). The requirements to do public noticing and the distribution of the notice would remain as they currently are under Rule 212. The only addition would be that the notice would specify the facility-wide risk at any school or school under construction within 1,000 feet of the new or relocated facility if the cancer risk at the school exceeds one in one million. This would potentially occur for some relocated facilities selecting the "no net increase" option. It is unlikely this would occur for new facilities, but provides additional information to parents and the community in that unlikely event.

Requirements for New or Relocated Facilities for Modification, Alteration, and Change of Condition

The final requirement in Proposed Rule 1401.1 is that once a new or relocated facility has been identified as subject to the proposed rule, it is always subject to the requirements of Proposed Rule 1401.1. Under this provision, a facility that is new or relocated, as defined under Proposed Rule 1401.1, must ensure that for future modifications, alterations, or change of conditions the

facility does not exceed one in one million cancer risk and 1.0 hazard indices or the risks originally permitted, if greater, from the relocated facility. For example, if the facility is new, future modifications must meet the facility-wide risk limits for new facilities (one in one million risk for all schools that were existing or under construction at the time it was originally sited). Similarly, for a relocated facility, the facility must, for the life of the facility and all future modifications, either meet the risk requirement of no net increase or less than one in one million for each school within 500 feet that was existing or under construction at the time the facility relocated. Thus, Proposed Rule 1401.1 does not require that the facility calculate the risk at any schools that are sited after the first permit application is submitted. Any modification, alteration, or change of conditions application filed by the facility is subject to the same facility-wide requirements. This requirement must be met regardless of any subsequent change of ownership at the facility. This provides continuing protection for school children from all new or relocated facilities.

Exemptions

The proposed rule contains six equipment exemptions and an exemption to clarify that a facility is only subject to the risk requirements for schools at the time the facility first locates. The list of equipment in subdivision (h) is equipment for which the cancer and non-cancer risks would not be added into the total facility-wide cancer and non-cancer risks. The first exemption is for all emergency internal combustion engines operating less than 200 hours per year as specified in Rule 1304 – Exemptions. This exemption is included because the engines typically operate only a few hours per year for testing and maintenance purposes. Engines subject to Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion Engines and Other Compression Ignition Engines are exempted because they are already regulated under Rule 1470. In-situ remediation equipment used to treat contaminated soil or water at former gasoline stations and dry cleaning facilities is exempted because it is a type of control equipment used to remove contaminants found in the soil and water. This type of equipment is left onsite only as long as needed to complete the decontamination process which is temporary in nature. In addition, this equipment is permitted and must meet the requirements of Rule 1401. Equipment permitted for use at various locations throughout the District and does not remain at one site for more than twelve consecutive months is also exempted because it is temporary and is regulated by other state and AQMD regulations. Experimental research operations permitted under Rule 441 – Research Operations and limited to one year or less in duration are also exempt due to their temporary nature. The final equipment exemption is for equipment which is exempt from written permits according to Rule 219. Proposed Rule 1401.1 also contains an exemption for facilities that states that a new or relocated facility is not required to calculate risk for any school which was constructed after the facility has its first application deemed complete nor is it required to add risk information to Rule 212 notices for such schools. This exemption is included so that facilities are not impacted by schools which site nearby after they are in operation, only those which were there at the time they first apply for permits.

Tables

Two tables are included at the end of the proposed rule to clarify the requirements for new and relocated facilities. Table 1 – Summary of Requirements for New Facilities lists the rule

requirements and, for each distance scenario, tells whether the risk, Rule 212 information, and subsequent application requirements are applicable. Similarly, Table 2 – Summary of Requirements for Relocated Facilities outlines the requirements for relocated facilities.

CHAPTER 3 – SOCIOECONOMIC ANALYSIS

Introduction

Proposed Rule (PR) 1401.1 potentially affects any new facility with toxic emissions that is within 500 feet of the outer boundary of a school or school under construction and, in some cases, 1,000 feet of a school. Relocated facilities with toxic emissions will be affected as long as they are within 500 feet of the outer boundary of a school or school under construction. New facilities will be affected if they are within 500 feet of a school or if they are between 500 and 1,000 feet from the nearest school but have no residential or sensitive receptor within 150 feet of the facility. Potential socioeconomic impacts of the proposed rule are approximated based on permit applications from previously new and relocated facilities.

Historical Data for New and Relocated Facilities

There are more than 370,000 businesses in the four-county area. Most do not require permits from the AQMD. Data analysis for the November, 2004 Concept Paper identified approximately 12,000 new or relocated facilities that were issued permits between 1998 and 2004. Of those facilities, 101 were located within 1,000 feet of a school(s) and had potential toxic emissions. Upon further examination, only 16 of the facilities (14 new and two relocated) had a maximum individual cancer risk (MICR) between one and 10 in a million at the nearest receptor (not necessarily the school). Out of the 16 facilities identified, 13 were service stations, one was a dry cleaner, one was a furniture manufacturer, and one was a natural gas engine. Over a six-year period, less than one tenth of a percent of the 12,000 new and relocated facilities were potentially affected by PR 1401.1.

New Facilities

Historical Data

Of the 16 facilities in the Concept Paper with cancer risk between one and ten in one million and within 1,000 feet of a school, 14 were new facilities. Of these 14 new facilities, five would not have been subject to PR 1401.1 because there was a residential receptor within 150 feet of the facility and the nearest school was beyond 500 feet. Therefore, based on historic permitting data, only nine new facilities would have been impacted by PR 1401.1. Five of those nine were within 500 feet of an school and four were within 500 to 1,000 feet of a school but had no residential receptor within 150 feet of the facility. All nine new facilities were service stations.

Based on permitted throughput levels, the nine service stations have a calculated MICR at the nearest receptor (not necessarily a school), based on maximum throughput, ranging from 1.4 to 9.99 in a million at the facility (the average cancer risk is 6.5 in a million). Based upon a dispersion curve of relative cancer risk as a function of distance for service stations, there would be a 90% reduction in risk by 330 feet. Therefore, a facility with a MICR for a residential or sensitive receptor of ten in a million at 70 feet would result in a cancer risk of one in a million at the school if the facility were 400 feet away from the school. It should also be noted that the

distance is measured from the center of the service station to the nearest property line of the school. If a new service station has a cancer risk greater than one in one million at a school, the compliance options include increasing the distance of the service station from the school or accepting a throughput limitation on the volume of gasoline sold.

For a typical service station, 4-6 pumps, a limitation on throughput is not expected to be significant. Depending on the meteorological conditions of the location of the service station, a service station sited 500 feet from a school could achieve a 1 in a million risk with a throughput limit of 2.7 to 9.7 million gallons per year. It should be noted that a typical service station with 4-6 pumps has an annual permitted throughput of approximately 3.5 million gallons per year. Although most service stations are currently permitted with a maximum throughput based on ten in one million risk allowed under Rule 1401, the average annual throughput is approximately 2 million gallons per year. Thus, it is likely that a typical size service station could site within 500 feet of a school without significant restrictions on throughput.

A large service station, 8-12 pumps, is typically permitted for an annual throughput of 12 million gallons per year. This size station could achieve a one in one million risk at approximately 1,000 feet. The distance from the center of the pumps to the fence line of the facility for the larger stations is approximately 300 feet. In addition, between 1998 and 2004, approximately 900 new service stations were permitted that are at least 1,000 feet away from a school. Less than 2 percent (16 out of 900) service station sited within 1,000 feet of a school. Therefore, PR 1401.1 would not impose a measurable impact on the small or medium service stations, however the larger stations might have to accept a reduced throughput condition or consider siting further from a school.

Projections

Based on Los Angeles County Economic Development Corporation's Mid-Year Update, 2005-2006 Economic Forecast and Industry Outlook, the four industries in Southern California that are expected to see good growth in the near term are: aerospace, business and professional management services, technology, and tourism. These industries are not expected to be impacted by Proposed Rule 1401.1 since aerospace businesses are generally not sited in neighborhoods and the other three industry groups are generally businesses that neither require an air quality permit nor are they a source of toxic air contaminants.

It is projected that the greatest population and industry growth in the district is expected to occur in San Bernardino and Riverside Counties.[2,3] These counties, as compared to Los Angeles

[2] 2003 Air Quality Management Plan, AQMD (SCAG data), August 2003.

[3] Mid-Year Update: 2005-2006 Economic Forecast & Industry Outlook, Economic Information & Research Department, Los Angeles County Economic Development Corp., July 2005.

County, generally have more open space and are expected to have more siting options. In well developed cities where open space is limited, more in-fill projects are expected. If siting options become more limited, there will be a greater need for Proposed Rule 1401.1 to ensure that a new or relocated facility emitting toxic air contaminants sited near a school does not exceed the risk thresholds established under the proposed rule to ensure school children are adequately protected.

The AQMD has experienced a decline in the number of applications for new gasoline stations over the past few years. In the mid- to late-1990s, between 200 to 300 applications for new stations were received per year. Since 2000, the number of applications for new stations has never exceeded 150 per year and approximately 110 were submitted in 2004. Although the number of applications for new construction for service stations has declined, the new stations typically request higher throughput limits. This trend is a further indication of the need for Proposed Rule 1401.1.

The proposed rule provides certainty to businesses in the planning stages of siting their business. It may also benefit facilities which locate outside the Rule 212 trigger distance of 1,000 feet from a school by avoiding the costs associated with responding to issues raised by parents and the community when siting near schools. As seen in recent years by the AQMD, response to these issues can result in large expenditures for staff time as well as additional testing and monitoring. In addition, it is much easier for a business to select a location farther away from a school, if the facility is subject to the risk requirements of Proposed Rule 1401.1, than to deal with community demands that it move or reduce its risk after it has already been constructed.

Future Expansion and Competitiveness

Proposed Rule 1401.1 requires that once a facility is determined to be subject to the proposed rule, it must always meet the risk limits for any subsequent modification. Future expansion of businesses resulting in additional toxic emissions would be limited, since the facility cap of one in one million continues to exist.

The size of the relocated facility, as well as the number of facilities in the similar line of business in the neighborhood and its proximity would determine whether there is less competition as a result of PR 1401.1. The past permit records showed that all new and relocated facilities that would have been subject to PR 1401.1 were gasoline stations. If the proposed rule had been in effect, it would have impacted less than one percent of new service stations (nine out of more than 900 service station permits) over the past six years.

As with other rules on new sources (e.g., Regulation XIII – New Source Review), PR 1401.1 requires that new and relocated facilities comply with lower risk standards than existing facilities to take into account the fact that retrofitting is typically more expensive than use of a new control technology in meeting the same emission standards. Generally, installation of new equipment at a new or relocated facility requires less physical modifications than retrofitting existing equipment at an existing facility since physical modifications to the existing environment may be needed to ensure the retrofitted equipment can be properly installed and operated.

Relocated Facilities

Historical Data

Of the 16 new or relocated facilities in the Concept Paper with cancer risk between one and ten in one million and within 1,000 feet of a school, only two were relocations. One of the two relocated facilities was a forced relocation due to eminent domain. The two relocated facilities would not have been impacted by the proposed rule since the nearest schools were beyond 500 feet. Therefore, no relocated facilities over the past six years would have been impacted by the proposed rule and the impact in the future is expected to be minimal.

The number of relocated facilities that would be subject to PR 1401.1 in the future is expected to be extremely small. It should be noted that relocated facilities are currently subject to Rule 1401 – New Source Review of Toxic Air Contaminants, where the MICR at the nearest receptor is limited to one in a million or ten in a million MICR with the installation of T-BACT. Therefore, facilities relocating may have to reduce their toxic emissions to meet the Rule 1401 requirements. Furthermore, a relocated facility with criteria or toxic emissions that is within 1,000 feet of a school would be subject to the noticing requirement in Rule 212 – Standards for Approving Permits and Issuing Public Notice. Historic permitting data indicates that many facilities have tried to avoid noticing requirements to schools and parents of school children by selecting a location beyond 1,000 feet of a school. The existence of Rules 1401 and 212 further minimizes the impact Proposed Rule 1401.1 will have on relocated facilities.

Future Land Use/Urban Areas

During the Pre-Hearing for Proposed Rule 1401.1, socioeconomic issues were raised regarding requirements for relocated facilities. The primary concern was that as the population of the area increases and infill occurs, land for businesses will become less available and, therefore, reduce the siting options for relocations. There are a variety of reasons why a business relocates. In some situations, such as eminent domain or loss of a lease, the reason to relocate may not be by choice. In many cases, the business wishes to relocate within the same community where it has an established customer base. Therefore, even though there were no historic impacts to relocated facilities, the proposed rule addresses these future concerns by allowing a "no net increase" approach to balance the need for relocation and health protection.

Based on comments received, the current proposal for Proposed Rule 1401.1 for relocated facilities was modified such that relocated facilities are required to evaluate the risk at schools that are within 500 feet as compared to 1,000 feet. In addition, under the proposed rule, relocated facilities have the option of demonstrating that the risk at the school does not exceed a cancer risk of one in a million and hazard indices of 1.0 or that there is no net increase in risk at any school within 500 feet from the newly relocated facility.

More facilities could be affected by fewer options for siting due to the proposed rule; however the proposal also prevents additional expenditures by businesses in the future to address community concerns over toxic exposure for school children, after the business is already constructed and operating.

Impact on Property Owners

Two issues were raised in regard to the impact of Proposed Rule 1401.1. First, some land has already been purchased for a specific business purpose, however construction has not begun and applications have not been submitted to the AQMD. Second, there is a potential for loss of income for a property owner of land near schools in that some facilities may not be able to site on that land due to the proposed rule risk limitations. Representatives of the business community expressed a concern that owners of property near schools could be impacted if the proposed rule precludes the siting of a facility, such as a service station, where that may be the best use of the land.

Proposed Rule 1401.1 provides a 90-day transition period for land which has already been purchased with a defined business purpose but is not yet developed and does not have applications for Permit to Construct/Operate deemed complete by the AQMD. The owner has 90 days from the date of adoption in which applications must be submitted and deemed complete.

There could also be a loss of income to a property owner when a facility chooses or cannot be sited at a specific location. The potential loss of income should be relatively small because demand for land, especially in a built-out area, would mean the property owner can lease to a facility whose line of business would be compatible with the proposed rule requirements. Permitting data shows there is a significant number of facilities permitted with minimal or no toxic air contaminant emissions. It may also be beneficial for owners to lease their properties to non-toxic operations.

AQMD Resources

Community concern, in many cases, consumes a great deal of AQMD staff resources. A total of more than 8,000 staff hours have been spent on the two latest cases involving near-school locations. Responding to these issues requires AQMD resources for such things as testing, monitoring, lab analysis, engineering evaluation, public meetings, and responding to public comments. This could have been avoided if a facility's potential risk at a school is addressed when it is permitted.

Other Potential Impacts

No additional health risk assessment is required of the new or relocated facilities because of the proposed rule since health risk assessments are already required under Rule 1401. Proposed Rule 1401.1 would require risk levels to be determined at schools in addition to risk at the nearest receptor. Cancer risk and the chronic and acute hazard indices at the school can be calculated based on a screening risk assessment which includes considering the maximum annual emissions of each toxic air contaminant, distance between the source and receptor, source characteristics such as stack height and building dimensions, operating schedule, and weather characteristics at the source. There is a minimal level of effort involved in calculating cancer risk and hazard index based on a screening risk assessment.

Conclusion

A new or relocated facility may consider pollution prevention alternatives or limit its capacity or hours of operation in order to meet the proposed rule requirements. Alternatively, the facility may select another location that is farther away from a school. Based on past experience with Rule 212, affected facilities are in favor of such option to avoid the noticing requirement. As such, there could be additional cost to the facility for searching for another location. However, such option may also be in the best interest of the facility as it would not have to expend resources to address community concerns associated with near-school locations. These activities can add uncertainty to a business. Historical permit application data indicated that the majority of new or relocated facilities were more than 1,000 feet away from a school, and thus would not have been subject to the proposed requirements.

Although small businesses could be disadvantaged compared to larger businesses in being less aware of a proposed rule, assisting small businesses in improving their compliance has been a top priority of AQMD staff. Additional outreach efforts will be made to work with local planners and small business during rule implementation.

CHAPTER 4 – IMPACT ASSESSMENT AND FINDINGS

Impact Assessment

Localized Toxic Impacts

The purpose of the proposed rule is to be more health protective for school children. It is recognized that the effects of toxic air contaminants are localized. The proposed rule applies to new or relocated facilities within 500 feet of the outer boundary of a school or school under construction (1,000 feet in some cases). The risk requirements are more stringent than the current equipment-based requirements in Rule 1401 for new or relocated facilities that elect to site near schools. Therefore, the new rule is expected to result in lower toxic risk levels for children at those schools where toxic emitting facilities are in close proximity than would be allowed under current rules. New facilities that cannot meet the more stringent risk requirements of Proposed Rule 1401.1 would have the option of locating elsewhere within the same general area rather than near a school.

Permitting Impacts

An analysis of historical permitting data was done as part of the first step of the rule development process for Proposed Rule 1401.1. The results of the analysis were reported in the concept paper, "More Stringent Risk Requirements for New or Relocated Facilities Near Schools." Permitting data for the past six years was studied to assess the magnitude and types of new and modified facilities emitting TACs that are located near schools. Based on the AQMD's permitting database, during the six-year period, AQMD staff issued more than 12,000 identification numbers to new or relocated facilities. Of those, approximately 300 new and relocated facilities sited near schools and approximately 100 of the 300 had toxic-emitting equipment. Of those, only 16 had a cancer risk of between one and ten in one million. Of the sixteen facilities, one facility with a facility cancer risk of between one and ten in one million was a relocated drycleaner. Other sources with between one and ten in one million facility risk included a natural gas-fired internal combustion engine with T-BACT and one facility with three spray booths, each with conditions limiting their MICR to less than one in one million. Thirteen of the sixteen facilities with cancer risk between one and ten in one million were service stations. For more detail, please see the concept paper in Appendix B.

Further analysis of the historical permitting data indicated that out of the 100 facilities with toxic emissions that sited near schools, only nine were relocations and only two of the nine had a cancer risk of greater than one in a million. Based on historical permitting data, only a few new or relocated facilities per year are expected to be affected by the proposed rule, even with the expected increase in population in the future.

Resource Impacts

Impacts on permitting staff are expected to be minimal. Changes in the AQMD permitting database will be required to identify those facilities affected by the proposed rule and record cumulative risk for affected facilities. Resource impacts can be met by existing staff.

Draft Findings under California Health and Safety Code Section 40727 Requirements to Make Findings

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report. In addition, under Section 40727.2, a written analysis comparing the proposed amended rule with existing federal and District regulations is required.

Comparative Analysis

Proposed Rule 1401.1 is essentially a toxics new source review rule for new or relocated facilities near schools and schools under construction. There are no comparable federal rules or regulations regarding toxic air contaminants at new or relocated facilities near existing schools. State law (California Health and Safety Code §42301.6) and AQMD Rule 212 require public notice for facilities locating near schools under certain circumstances. One of the criteria that triggers public noticing requirements is proximity to a school with an emissions increase from new, relocated, or modified equipment. Another trigger is toxic emissions above a level of one in one million cancer risk from new, relocated, or modified equipment. Rule 212 requires notification to the affected public 30 days prior to the issuance of a permit to construct. AQMD Rule 1402 establishes risk levels for existing facilities but does not apply to new sources. AQMD Rule 1401 applies to new sources, at an equipment level. It allows up to one in one million cancer risk for each new equipment at a facility and up to ten in one million if the equipment has T-BACT. Unlike Proposed Rule 1401.1, Rule 1401 has no facility-wide requirements and has no special provisions for facilities locating near schools. Therefore, there are no existing rules or regulations that specifically set facility-wide toxics emissions limits for new or relocated facilities near schools.

Draft Findings

Necessity

A need exists to adopt Proposed Rule 1401.1 to minimize the exposure of school children to toxic air contaminants and to help meet the Board's goals and objectives regarding cumulative impacts from toxic air contaminants.

Authority

The AQMD Governing Board has authority to adopt Proposed Rule 1401.1 pursuant to the California Health and Safety Code Sections 39002, 39650 et. seq., 40000, 40001, 40440, 40441, 40463, 40702, 40725 through 40728, 41508, 41700, and 42300.

Clarity

Proposed Rule 1401.1 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency

Proposed Rule 1401.1 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication

Proposed Rule 1401.1 will not impose the same requirements as any existing state or federal regulations. The rule is necessary and proper to execute the powers and duties granted to, and imposed upon, AQMD.

Reference

By adopting Proposed Rule 1401.1, the AQMD Governing Board will be implementing, interpreting or making specific the provisions of the California Health and Safety Code Sections 39666 (District new source review rules for toxics), and 41700 (nuisance).

Rule Adoption Relative to Cost-Effectiveness

Proposed Rule 1401.1 is not a control measure in the 2003 Air Quality Management Plan (AQMP) and thus, was not ranked by cost-effectiveness relative to other AQMP control measures in the 2003 AQMP. Cost-effectiveness in terms of dollars per ton of pollutant reduced is not applicable to rules regulating toxic air contaminants. Once an industry (or facility) determines its current risk associated with the emission of TACs and determines what control approaches would reduce the risk to below the significance level provided in Proposed Rule 1401.1, the cost-effectiveness could be determined for that facility only (case-by-case analysis), and would not be applicable to another facility or industry. Since Rule 1401 currently limits MICR at the nearest receptor to be one in one million without T-BACT, new equipment without T-BACT would already meet the risk requirements of Proposed Rule. If the MICR is greater than one in one million, current Rule 1401 requires installation of T-BACT and limits MICR to ten in one million. Therefore, the costs of control equipment for toxics would typically be associated with Rule 1401 rather than Proposed Rule 1401.1.

Incremental Cost-Effectiveness

Health and Safety Code Section 40920.6 requires an incremental cost-effectiveness analysis when there is more than one control option which would achieve the emission reduction objective of the proposed amendments, relative to ozone, CO, SOx, NOx, and their precursors.

Since Proposed Rule 1401.1 applies to toxic air contaminants, the incremental cost-effectiveness analysis requirement does not apply.

CEQA

Pursuant to State California Environmental Quality Act (CEQA) Guidelines, the SCAQMD is the Lead Agency and will prepare a Notice of Exemption for the project identified above. The SCAQMD has reviewed the proposed project pursuant to state CEQA Guidelines §15002(k) (1), the first step of a three-step process for deciding which document to prepare for a project subject to CEQA. Staff reviewed all 12,000 new and relocated facility permits over the past six years and identified 100 facilities that emit air toxics and are located within 1,000 feet of a school. Of these 100 facilities all but 16 have a cancer risk less than one-in-one-million, achieved through operational limits or installation of best available control technology for toxics (T-BACT). The environmental effects of installing T-BACT at facilities emitting air toxics have previously been analyzed by the SCAQMD in CEQA documents prepared for Rules 1401, 461, 1421, etc. The remaining 16 facilities have a calculated cancer risk greater than one-in-one-million after the installation of T-BACT in accordance with existing SCAQMD rules (Rules 461, 1401, 1421) and regulations (Regulation XIII). As reflected in this historical data, future new and relocated facilities subject to PR 1401.1 will reduce production levels, install T-BACT or operate at another location in order to comply with the proposed rule requirements. Of these options none would generate significant adverse environmental impacts beyond what would result without subjecting the facilities to the requirements of PR 1401.1. Since T-BACT equivalency is already required by Regulation XIII and the source specific rules, there is no additional environmental impact due to 1401.1. Because the proposed project will not require major modifications at existing facilities to comply beyond what is required from existing SCAQMD rules and regulations, it can be seen with certainty that there is no possibility that the proposed project in question has the potential to have additional significant adverse effect on the environment. Thus, the proposed project is exempt from CEQA pursuant to CEQA Guidelines §15061(b)(3) - Review for Exemption. A Notice of Exemption will be prepared pursuant to state CEQA Guidelines §15062 – Notice of Exemption. The Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside and San Bernardino counties immediately following the adoption of the proposed project.

References

2003 Air Quality Management Plan (AQMD, August 2003).

Air Quality and Land Use Handbook: A Community Health Perspective (California Environmental Protection Agency and California Air Resources Board, April 2005).

Air Quality Guidance in School Site Selection (AQMD, June 2005).

Air Toxics Hot Spots Program Risk Assessment Guidelines, the Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (California Environmental Protection Agency and Office of Environmental Health Hazard Assessment, August 2003).

County Business Patterns (U.S. Census Bureau, 2002).
http://www.census.gov/epcd/cbp/view/cbpview.html

Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning (AQMD, May 2005).

Guidance for School Site Risk Assessment Pursuant to Health and Safety Code Section 901(f) Guidance for Assessing Exposures and Health Risks at Existing and Proposed School Sites (Office of Environmental Health Hazard Assessment and California Environmental Protection Agency, February 2004).
http://www.oehha.ca.gov/public_info/public/kids/pdf/SchoolscreenFinal.pdf

Mid-Year Update: 2005-2006 Economic Forecast & Industry Outlook (Economic Information & Research Department, Los Angeles County Economic Development Corp., July 2005).

More Stringent Risk Requirements for New or Relocated Facilities Near Schools (AQMD, November 2004).

Potential Control Strategies to Address Cumulative Impacts from Air Pollution (AQMD, August 2003).

Proximity of California Public Schools to Busy Roads (Environmental Health Perspectives, January 2004).

Risk Assessment Procedures for Rules 1401 and 212, Version 7 (AQMD, July 1, 2005). http://www.aqmd.gov/prdas/Risk%20Assessment/RiskAssessment.html

Rule 212 – Standards for Approving Permits and Issuing Public Notice (AQMD, amended November 14, 1997).

Rule 441 – Research Operations (AQMD, May 7, 1976).

Rule 1166 – VOC emissions from Decontamination of Soil (AQMD, May 11, 2001).

Rule 1304 – Exemptions (AQMD, Amended June 14, 1996).

Rule 1401 – New Source Review of Toxic Air Contaminants (AQMD, amended May 2, 2003).

Rule 1402 – Control of Toxic Air Contaminants from Existing Sources (AQMD, amended March 17, 2000).

Rule 1470 – Requirements for Stationary Diesel-fueled Internal Combustion and Other Compression Ignition Engines (AQMD, adopted April 2, 2004).

APPENDIX A

COMMENTS AND RESPONSES

APPENDIX A

The Preliminary Draft Staff Report for Proposed Rule 1401.1 was released for public review on June 24, 2005. A Public Workshop was held on July 6, 2005 with the close of the public comment period on July 20, 2005. This appendix provides a summary of comments received at the workshop or through the mail and all comments received during the rule development process with corresponding AQMD responses.

Need for Proposed Rule 1401.1

1. Comment: Staff's analysis of the past six years of permitting data indicates that Proposed Rule 1401.1 is not needed. AQMD resources could be used better than developing Proposed Rule 1401.1. The current permitting regime, including noticing requirements for facilities within 1,000 feet of a school, deter the siting of facilities near schools so there is no basis for finding that there is a necessity for Proposed Rule 1401.1

and

The District must make a finding of "necessity" for the proposed rule. With Rule 1401 in place, a source is currently only allowed ten in one million cancer risk. That is less than one percent of background toxic risk which is about 1,400 in one million. Why is that not protective enough?

Response: Proposed Rule 1401.1 is pre-emptive and preventative in nature and will prevent potentially high toxic risk facilities from siting near a school. In the past, AQMD has spent thousands of staff hours responding to issues arising from toxic-emitting facilities near schools. Not only will the proposed rule decrease AQMD staff time for response, the risk requirements of the proposed rule allow certainty for businesses when making siting decisions.

2. Comment: Mobile sources are a greater contributor to risk at schools than stationary sources. Efforts should be directed toward mobile source instead.

Response: It is true that mobile sources are a large contributor to risk at schools. Mobile sources are being addressed through several federal, state, and local programs. Proposed Rule 1401.1 addresses stationary sources, another part of the whole picture. Although non-stationary sources may pose a greater health risk than new stationary sources for some schools, this does not diminish the need to provide additional health protective measures to protect school children from the exposure of toxics from new stationary sources, particularly as many schools are already impacted by a variety of air pollution sources. The AQMD, as well as other state agencies, is working to address the air quality issues that many schools are currently facing through programs such as the AQMD's School Bus Replacement Program, implementation of SB 352 which prohibits a local

educational agency from approving acquisition of a school site within 500 feet of a busy roadway unless the air quality at the site does not pose a health risk to pupils or staff, and California Environmental Protection Agency's information sheets for schools and parents regarding air pollution from nearby traffic and children's health. AQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning and AQMD's Air Quality Guidance in School Site Selection also address the issue of mobile source emissions near schools.

3. Comment: Stationary sources are such a small part of the overall risk that the proposed rule will not make any difference. A more effective way to address cumulative impacts would be to identify areas with the highest air toxics and devise strategies to lower the risk.

Response: Addressing air toxic cumulative impacts is a multi-faceted process. Mobile and area sources of air toxics are being addressed by many federal, state, and local programs and regulations. Identifying particular areas of the AQMD with the highest risk from air toxics and developing strategies to address the risk is one of the strategies from the Cumulative Impacts white paper. Work on that project is ongoing. Proposed Rule 1401.1, one of 25 identified reduction strategies from the White Paper, addresses another part of air toxic cumulative impacts in the region.

4. Comment: There are already many rules, regulations, and programs that protect school children. Proposed Rule 1401.1 would add an unnecessary degree of conservatism to already ultra conservative regulatory and permitting process.

Response: AQMD's current toxics new source review rule, Rule 1401 – New Source Review of Toxic Air Contaminants, does not specifically address sensitive receptors such as school children. Therefore, Proposed Rule 1401.1 is a necessary part of the programs and regulations protecting school children.

5. Comment: The proposed rule is different from rules imposing emission reductions to meet regional goals for criteria pollutants or air toxics. Under the proposed rule, facilities will be denied permits if they locate in specific areas unless they can meet the risk requirements. Regional air toxics background risk is on the order of 1,400 in one million. We understand the need to protect sensitive individuals, however if a facility will be denied a permit in a specific location, it should be based on a finding that it will cause a problem and the proposed rule requires no such finding.

Response: Rules 1401 and 212 also use the one in one million criteria as a basis for denying permits for new, relocated or modified equipment without T-BACT, however that is on an equipment basis rather than a facility basis.

In addition to reduction of emissions, these rules serve to protect the health of nearby communities and schools and to inform them of risk from nearby facilities. Also, this rule is part of a cumulative impact reduction strategy. Staff believes it contributes to solving a cumulative impact problem near schools.

6. Comment: Improving the air quality directly at the most impacted schools, those near freeways, with strategies such as air conditioning systems and filters at the schools, seem more productive than the proposed rule, especially if significant CEC funding is available.

and

The AQMD should consider an initiative that would relocate the drop off point for parents of school children as an alternative solution that would not turn businesses away from communities that need jobs.

Response: The concept of improving the indoor air quality with filters and air conditioning systems at heavily impacted schools has been discussed at Proposed Rule 1401.1 Working Group meetings and before the Governing Board in November 2004. This approach would address some air impacts, such as particulate matter, however, it would not be a solution for many toxic air pollutants. It has also been noted that children spend a lot of time outdoors, at which time this option would provide no protection. The idea of an alternative drop-off point for parents taking their children to school, would move some of the mobile source emissions to a further distance, but might raise safety concerns, particularly for small children. Additionally, children may spend time anywhere on the school property, not just indoors or at the drop-off point, so it is necessary to protect children anywhere within the school boundaries. Again, this would only address one source of toxic emissions. Therefore, staff feels the proposed rule is also a necessary action to protect school children.

Distance

7. Comment: The Concept Paper recommended 1,000 feet from the new or relocated facility as an appropriate distance. We recommend ¼ mile to be consistent with the Education Code which requires that schools must consider air quality issues within ¼ mile of a proposed school site or existing school site addition.

Response: Proposed Rule 1401.1 applies only to new or relocated facilities siting near existing schools. It does not apply to new school sitings or expansions at existing schools. The 1,000 foot distance was recommended in the Concept Paper because it is the distance to a school used in Rule 212 to

trigger public notice. A radius of 1,000 feet from the facility would be very health protective for schools since risk values decrease as the distance from the source increases.

8. Comment: The facility example and the risk dilution curve presented in the Public Workshop were for service stations. What if the facility is some other kind of business such as a chrome plating facility?

Response: The service station example was chosen primarily because of the results of the analysis of the past six years permitting data. Out of the sixteen facilities within 1,000 feet of a school that had a cancer risk between one and ten in one million, thirteen were service stations. Other stationary sources have similar dilution curves, where the risk is reduced by eighty to ninety percent over a distance of 300 to 500 feet. Examples of dilution curves for risk, including one for chrome platers, may be found in CalEPA and CARB's "Air Quality and Land Use Handbook: A Community Health Perspective". The risk curve for the chrome plater drops off more steeply than that for service stations, with a 90% reduction at approximately 300 feet. No chrome plating facilities were found in the six years of data. Also, part of the May 2003 amendment to Rule 1469 – Hexavalent Chromium Emissions from Chrome Plating and Chromic Acid Anodizing Operations has stringent risk requirements for hexavalent chrome-emitting facilities near schools.

9. Comment: We feel the rule is necessary, however we believe the 1,000 foot radius is a better choice for distance because children are the most susceptible receptors. Their respiration is more rapid, they often breathe through the mouth, and they spend a lot of time outdoors. We also feel the rule would be easier to follow if 1,000 feet is used.

and

Children are our most sensitive receptors. We support the 1,000 foot distance because it is more health protective. Reducing the distance from a new or relocated facility from 1,000 feet in the Concept Paper to 300 to 500 feet may be harmful to school children.

Response: The policy objective for Proposed Rule 1401.1 is to achieve a risk level at schools of no greater than one in one million cancer risk from new or relocated facilities. This is achieved for new facilities by first considering a 500 foot radius around the new facility. The facility must meet the one in one million cancer risk threshold for any school or school under construction within that radius. If the nearest school is beyond 500 feet and there is a residential or sensitive receptor within 150 feet of the new facility, the risk at that receptor is required by Rule 1401 to be ten in one

million or less with T-BACT. Based on the dilution of risk over distance, the ten in one million risk would be reduced by about 90 per cent at the school, or around one in one million. If the nearest school is between 500 and 1,000 feet and there is no residential or sensitive receptor within 150 feet, the facility must meet the one in one million criteria. The requirements for relocated facilities are different in recognition of the socioeconomic impacts faced by relocating facilities, but protect the school by not allowing an increase in risk.

10. Comment: The assumption of 90% dilution of risk by 500 feet does not take into account cumulative impacts.

Response: That is true, however, the purpose of the rule is to minimize the effect of cumulative impacts on schools by placing thresholds on new and relocated facilities. Another strategy from the 2003 Cumulative Impacts White Paper was proposed to assess the impacts of existing facilities near schools and develop strategies to lessen those impacts. This may or may not result in rule development, but will be an entirely separate project from Proposed Rule 1401.1 recognizing the differences in existing sources and new sources.

11. Comment: The distance of 100 meters agreed upon for the Cumulative Impacts White Paper approved by the Board in September 2003 was developed after much effort on the part of the Cumulative Impacts Working Group and was supported by Working Group members and members of the public. Deviating from this concept at the rulemaking stage undermines the process through which the concept was painstakingly developed and approved.

Response: Staff appreciates the work of the Cumulative Impacts Working Group. The Cumulative Impacts White Paper proposed concepts and made recommendations for many different approaches to addressing the cumulative impacts of air toxic emissions. The White Paper was a policy level document rather than actual rulemaking. During the rulemaking process for Proposed Rule 1401.1, the distance issue was studied in more detail and it was determined that a 500 foot (and in some cases, 1,000 foot) radius around the facility would be more appropriate based on the dilution of risk from stationary sources over distance which drops off by approximately 90% by 300 to 500 feet, depending upon the type of source.

12. Comment: The proposed "trigger distance" of 1,000 feet is not supported by empirical data and is not consistent with distance used by other agencies such as ARB in its Air Quality and Land Use Handbook which recommends a 300 foot (100 yard) buffer between significant air toxics sources and sensitive receptors such as schools. A distance of 100 meters is more appropriate.

Response: The "trigger distance" for Proposed Rule 1401.1 is 500 feet in most cases for new facilities and in all cases for relocated facilities. For new facilities where the nearest school is between 500 and 1,000 feet, the proposed rule requires risk analysis only if there is no residential or sensitive receptor within 150 feet of the new facility. The "trigger distance" for Proposed Rule 1401.1 was based on data showing that the concentration of toxic air contaminants decreases as distance from the source increases. In the case of service stations, the concentration is reduced by approximately 90 percent at about 350 feet. MICR, according to Rule 1401 must not exceed 10 in one million at the nearest receptor, so if the nearest residential or sensitive receptor is within 150 feet of the facility and MICR is 10 in one million, the risk will drop off by 90% to one in one million at approximately 350 away so a school at 500 feet would be protected. However, the nearest residential or sensitive receptor could be at a greater distance than 150 feet from the facility. For example, if the nearest residential or sensitive receptor is at 400 feet, and the MICR is allowed to be 10 in one million under Rule 1401, the cancer risk would not be reduced to one in one million until about 750 feet so a school at 500 feet from the source would not be protected. Therefore, the proposed rule requires a risk demonstration when the nearest school is 500 to 1,000 feet away and there is no residential or sensitive receptor within 150 feet of the new facility. CARB's "Air Quality and Land Use Handbook: A Community Health Perspective" gives guidance for school siting and recommends avoiding siting new sensitive land uses within 300 feet of a gas station; however, it recommends a distance of 300 to 500 feet for drycleaners and 1,000 feet for chrome platers, rail yards, and distribution centers. It specifies 500 feet for freeways and does not specify a distance for some other sources such as refineries and ports. Therefore, CARB guidance does not uniformly specify 300 feet. AQMD staff believes the 500 and 1,000 feet criteria in the proposed rule are more health protective. Proposed Rule 1401.1 applies to all types of sources, therefore staff feels 300 feet would not provide adequate protection to the school children.

Relocations

13. Comment: Allowing the "no greater risk" option for relocations provides an incentive for facilities to relocate near schools.

Response: Staff disagrees. The "no greater risk" option is more likely to provide a disincentive for relocation near schools. In general, when permitting relocated facilities, the AQMD treats them as if they were new facilities. This means they are subject to Rule 1401 requirements which would allow up to ten in one million cancer risk per equipment with T-BACT. Under Proposed Rule 1401, the same facility would be subject to Rule 1401 and

Proposed Rule 1401.1 requirements. If, for example, the facility-wide cancer risk from the facility's previous location at a given school was six in one million, then it would be constrained by Proposed Rule 1401.1 to a risk of six in one million or less from its new location. This is more stringent than Rule 1401 requirements.

14. Comment: Instead of the "no net increase" option for relocation of facilities, the proposed rule should require a decrease in risk from the new location. Ideally, relocated facilities should have to meet the same requirements as new facilities.

and

The rule should not differentiate between new and relocated facilities.

Response: Many relocations are involuntary, such as businesses that relocate because of eminent domain or loss of a lease. The "no net increase" concept allows facilities that relocate to move within the same vicinity and still maintain their current level of production or throughput. The provisions of the proposed rule recognize the special circumstances faced by facilities that relocate, i.e., that they are already in business, and do not have as much flexibility as a new business to move out of the area or to enter a different business.

15. Comment: Relocations should not be treated the same as new facilities. For example, a relocated source is an existing business operating in accordance with agreed upon permit conditions. The business may see growth opportunities or may be forced to relocate. The imposition of more rigorous risk levels on a business with a good compliance history might cause the business to close and take jobs and revenue from a community and the state. Wouldn't it make more sense to include relocations when Proposed Rule 1402.1 for existing sources near schools is considered? Further discussion is warranted.

Response: Relocated facilities are not treated the same as new facilities under the proposed rule. AQMD permits are site-specific and, therefore, the conditions are written not only for the equipment, but also for the location of the equipment. Regulation XIII – New Source Review, and Rule 1401 – New Source Review for Toxic Air Contaminant both treat relocations as new sources. For the purposes of Proposed Rule 1401.1, the requirements for relocated facilities include an option for "no net increase" in risk at an affected school rather than subjecting these businesses to the same requirements as new facilities. As mentioned in the socioeconomic analysis in the staff report, based on the past six years permitting data, only two of the sixteen facilities located within 1,000 feet of a school and

having a cancer risk for between one and ten in one million were relocated facilities and both were further than the proposed 500 foot distance from the nearest school. The job impacts from the applicability of this rule to relocated facilities are expected to be minimal based on this data.

Land Use and Socioeconomic Analysis

16. Comment: The AQMD should be sensitive to the region's growing need for employment-generating development.

and

The needed infrastructure in the most densely populated areas of the basin will not be able to be sited because of extremely conservative risk restrictions.

Response: The past six years permitting data indicate that the proposed rule will have minimal impacts on new or relocated facilities. It would seem many cities are already densely populated and still we see that facilities are siting beyond 1,000 feet from schools. However, staff recognizes that as the area population continues to grow the choices for siting a facility may become fewer, particularly for relocations. In view of the special circumstances faced for relocations, the rule requirements for relocated facilities differ from those for new facilities.

Needed infrastructure, such as sewage and water treatment plants, may be sited near schools so long as the facility complies with the rule requirements. Since these facilities are typically large and require long term planning, any equipment producing toxic emissions could be sited further than 500 or 1,000 feet from a school. As with other long term projects, the impacts of the proposed rule and future school construction should a be a consideration for this type of facility at the time siting decisions are made.

17. Comment: A socio-economic analysis and analysis of land use data should be done as part of rule development for Proposed Rule 1401.1.

Response: Analysis of recent permitting data indicated that very few new or relocated facilities sited within 1,000 feet of an existing school over the past six years. The current proposal primarily affects facilities siting within 500 feet of a school or school under construction and is expected to impact only two to three facilities per year. Furthermore, the proposed rule establishes risk thresholds, but does not prohibit the siting of a facility near a school, provided it meets the requirements of the proposed rule. Please

see Socioeconomic Analysis in Chapter 3 of the Staff Report for more detail.

18. Comment: Will the socioeconomic analysis address such issues as the impacts of the rule on an owner of property near a school where the best use of the property may be, for example, a service station.

Response: Yes, the socioeconomic analysis addresses such issues. Please see the section on impacts on property owners in Chapter 3. In general, the impact on property owners is expected to be small because the property, especially in built-out areas, would likely be used for some other purpose. With the concern for toxics, it is difficult to understand why the best use of a property near a school would be a service station.

19. Comment: We support Proposed Rule 1401.1 because it provides needed protection for school children. It also increases certainty and predictability for business when considering the location for a new facility.

Response: Staff agrees that the added protection afforded by the proposed rule is needed to protect school children and that it also provides regulatory certainty for those siting new or relocated businesses.

20. Comment: It seems the AQMD is trying to address a zoning issue by writing a rule. Rules should not be used to solve zoning issues.

Response: Proposed Rule 1401.1 does not prohibit the siting of a facility emitting toxics from siting near a school. Proposed Rule 1401.1 establishes a risk threshold. Similar to Rule 1401, risk thresholds are specified for certain receptors. Proposed Rule 1401.1 takes an additional step to provide more stringent risk limits when siting near schools to provide greater health protection for children. AQMD is not specifying what uses may be made of a particular property, as is done by zoning, but rather is imposing specific air pollution control requirements similar to all other AQMD rules.

21. Comment: If a new or relocated business moves into the same neighborhood as existing businesses of the same type and locates within the same distance from an existing school, the new or relocated business would have to meet stricter standards under Proposed Rule 1401.1 and would, therefore, be at an economic disadvantage compared to the existing businesses. Furthermore, with the "once in, always in" provisions, it would always remain at a disadvantage. The proposed rule is complex and confusing and it is doubtful that a small business new to the region would be sophisticated enough to know what questions to ask and who to rely on for

correct answers before falling into an economic or environmental trap. This should be discussed further.

and

The "once in, always in" requirement of the proposed rule places relocated facilities at a competitive disadvantage because it would not allow expansion. Existing businesses would have the flexibility to make modifications and alterations to meet changing market conditions, but relocated businesses would not. This needs further discussion.

Response: City and county building departments are required to get a clearance from the AQMD prior to issuing a building permit. At the time the business owner contacts the AQMD for this clearance they are informed of air quality requirements for their particular type of business. For example, any new or relocated facility that sites within 1,000 feet of a school is subject to the additional requirements of Rule 212. It is also likely that a facility emitting toxics would be aware that there are environmental laws with which they must comply.

Proposed Rule 1401.1 was designed to limit the toxic impacts from new and relocated facilities that choose to site near schools. Based on the analysis of the past six years of permitting data, the proposed rule is expected to impact only two or three facilities per year. Approximately 97 per cent of new and relocated facilities over the past six years chose to site beyond 1,000 feet from a school. Of those that sited within 1,000 feet, most either had no toxic emissions or complied with the risk limits in the proposed rule. Impacted facilities would have the option of accepting permit conditions that limit their risk or siting further than 500 feet from a school if the limits put them at a disadvantage. However, it is reasonable to impose more stringent requirements on new or relocated facilities since they can learn of the rule before they invest in a location and have the option of siting elsewhere. The 2003 Cumulative Impacts White Paper also contained a strategy to address the risk from existing facilities near schools which staff will begin work on at the conclusion of the current project. Development for Proposed Rule 1401.1 has been through a thorough public process over the past fourteen months, including the November 2004 Concept Paper and subsequent public comment period, five working group meetings, numerous committee and advisory group meetings, a public workshop, and a pre-hearing.

22. Comment: The proposed rule could have far-reaching economic consequences and could result in some regions having fewer available services, such as retail gasoline outlets than others leading to less competition. In May 2005 the Board directed staff to prepare a Socioeconomic Report and CEQA

document before the draft final rule language for Rule 1401.1 was released. These reports should be distributed to the public at least 30 days prior to scheduled Board action.

Response: The socioeconomic analysis is included in the draft and final staff report. The draft staff report and draft rule language will be available to the public at least 30 days prior to the scheduled public hearing on October 7, 2005. A Notice of Exemption has been prepared by CEQA and will be included with the final Board package in September.

Risk Assessment

23. Comment: The word "assumption" was used a lot in reference to the risk reduction over distance. How can that be used for the basis of a rule?

Response: The assumptions made for the proposed rule have a scientific basis. The concept of risk reduction over distance is based on scientific modeling of the dispersion of pollutants taking into consideration several parameters including the toxic air contaminant, emissions rate, type of source (point or volume source), weather conditions, lifetime exposure time, and equipment operating hours.

24. Comment: AQMD should evaluate the ramifications of the new OEHHA health risk assessment procedures for this proposal.

Response: The new risk assessment procedures result in approximately 30 percent higher cancer risk values for worker receptors and only slightly higher values for residential receptors. Risk assessment for school children is based on a 70-year lifespan because it is more health-protective and because, presumably, the children at a school also live in the area and may continue to live in the area after they finish attending the school. Since Proposed Rule 1401.1 is based on the health risk at schools, this revision to the health risk guidelines is expected to have minimal impacts on future siting of new facilities near schools.

25. Comment: Will the risk be at the boundary of the source, the property line of the school, or at the location of the classrooms? Will it take into account the limited time that children spend at school or will it assume a 70-year lifetime exposure as if it were a residential area?

Response: The risk for Proposed Rule 1401.1 will be calculated at the outer boundary of the improved property at a school or the outer boundary of a site where the school is under construction. The risk assessment procedures are the same as those used for Rule 1401. Risk assessment for school children is based on a 70-year lifespan which is a more conservative and health-

protective assumption used in the AQMD risk assessment procedures for all sensitive receptors.

26. Comment: The District must make a finding of "clarity" for the proposed rule. It seems difficult to make that finding when it is not clear from the rule how the risk assessment is done.

Response: The rule states, in subdivision (d), that the Rule 1401 risk assessment procedures will be used. These are the same procedures currently used for Rule 1401 analysis. The only difference is that for Rule 1401 the risk is calculated at the nearest receptor. For Proposed Rule 1401.1, the risk would be calculated at the school.

27. Comment: Shouldn't the rule contain a definition of receptor?

Response: Definitions of receptors and other risk assessment terms are included in the Risk Assessment Procedures for Rules 1401 and 212. Subdivison (d) of the proposed rule states that these procedures will be used for risk assessment for the purposes of Proposed Rule 1401.1. The procedures and Rule 1401 are referenced in PR1401.1. All facilities subject to PR1401.1 are also subject to Rule 1401 and the risk assessment procedures are the same for both rules.

28. Comment: The District disregards the CalEPA exposure guidelines in "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments" and "Guidance for Assessing Exposures and Health Risks at Existing and Proposed School Sites" and arbitrarily assumes that risk to children at schools should be evaluated as if they will be present for a continuous 70-year period. The District should employ policies and procedures adopted by the State.

Response: The risk assessment procedures for Proposed Rule 1401.1 are the same as those used for risk assessment for all other AQMD rules and programs. Subdivision (d) of the proposed rule states "For the purpose of this rule, the cancer risk and hazard indices shall be calculated pursuant to Rule 1401 and the applicable risk assessment procedures." These procedures are based on the guidelines developed by Cal EPA's Office of Environmental Health Hazard Assessment (OEHHA) for the Air Toxics Hot Spots Program. The use of a 70 year lifespan for sensitive receptors such as school children is consistent with AQMD's "Risk Assessment Procedures for Rules 1401 and 212" and OEHHA's recommendation that a 70-year exposure duration be used for risk management decisions (page 8-4 of "Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments"). AQMD's CEQA guidelines also consider schools as

sensitive receptors and a 70-year exposure is used for all sensitive receptors.

The CalEPA "Guidance for Assessing Exposure and Health Risks at Existing and Proposed School Sites" provides a procedure to calculate risks on a year by year basis for toxic chemicals found as contaminants at existing and proposed school sites. This document, however, does not provide guidance or recommendations for exposure periods regarding risk management decisions. A representative of OEHHA confirmed to the AQMD Health Effects Officers that using the procedures in the hot spots guidance document and the 70-year exposure period for risk management decisions is consistent with OEHHA guidelines. The representative further stated that the school risk assessment guidelines were developed specifically for toxics on site, and were not designed to assess facility emissions. Thus, the procedures as applied in this proposed rule are fully consistent with the CalEPA guidelines regarding risk assessment and risk management decisions. A representative of OEHHA will be present at the Public Hearing for Proposed Rule 1401.1 to respond to questions.

29. Comment: Because Proposed Rule 1401.1 is for the public as well as businesses, it should contain language that clearly specifies that exposure to cancer causing chemicals is based on ultra conservative, 70-year exposure scenarios. It is inconceivable that a child would ever attend a single school and be exposed to the same cancer causing chemicals from sources other than mobile sources for 12 consecutive years.

Response: This information is now included in the definition of "cancer risk". As previously stated, the proposed rule requires that AQMD's "Risk Assessment Procedures for Rules 1401 and 212" be used for risk calculations. The guidelines contain the assumptions used for risk assessment, including the 70-year exposure for sensitive receptors (page 16). AQMD's guidelines are based on OEHHA's Hot Spots risk assessment guidelines and are available on the AQMD website at http://www.aqmd.gov/prdas/Risk%20Assessment/RiskAssessment.html. Staff believes students may indeed attend the same or very nearby school for 12 years.

30. Comment: The District has long held individual sources to a ten in one million risk level under Rule 1401. This is consistent with risk levels considered significant under AB2588, California's Proposition 65 and the Commission on Risk Assessment's findings with respect to residential risk. It now appears that, by implementing this rule, the District is deriving a new risk criterion of one in one million as the basis for either denying permits for new sources without presenting any justification or scientific basis for this significant change in assessing risk.

Response: District Rule 1401 uses the one in one million criteria for sources which do not use Best Available Control Technology for Toxics. Only those sources which employ T-BACT are allowed the ten in one million level for cancer risk. Many facilities choose to accept a permit condition limiting their cancer risk to one in one million rather than adding controls. The scientific basis for the proposed rule is that these sources contribute in a measurable way to cumulative risks, which AQMD wishes to reduce.

31. Comment: The District should allow risk assessment to be done with the most appropriate site modeling to accurately demonstrate risk.

Response: As with Rule 1401 and 1402 risk assessment, the applicant is allowed to use site specific Tier 4 modeling to demonstrate compliance with the risk requirements of Proposed Rule 1401.1

32. Comment: The risk assessment approach underestimates the health effects of toxins on children and does not provide adequate protection for children because:

- Children receive proportionally higher doses of air pollutants;
- It does not take into account the potential for multiple pathway exposure;
- It fails to consider all illnesses;
- It does not consider cumulative impacts and synergistic effects of environmental hazards; and
- Dose response assessments for adults do not adequately take into account the risk to children.

Response: The OEHHA risk assessment guidelines acknowledge the higher intake rates on a per body weight basis for children, and include exposure factors for children to take this into account. Multiple pathway exposures are also included in the OEHHA guidance.

OEHHA has developed Reference Exposure Levels (RELs and a Hazard Index (HI) to account for non-cancer health effects and these are included in the risk assessment guidelines adopted by OEHHA.

The risk assessment procedures do not account for the potential for synergistic impacts, and would thus underestimate any such risks to the extent that they may be present.

The proposed rule does not address cumulative impacts from other sources of exposure.

The US EPA has recently published guidelines on the potential risks that occur during early life exposures to carcinogens, and has recommended that for some substances an increased weighting for cancer risk be given to exposures that occur at ages under 16 years ("Supplemental Guidance for Assessing Susceptibility from Early-Life Exposures to Carcinogens" (EPA/630/R-03/003F, March 2005). OEHHA staff is currently evaluating such risks that occur during childhood exposures, and will develop child specific potency factors for toxic substances where appropriate. Once OEHHA promulgates children specific potency factors, they will be incorporated into the risk assessment guidelines.

Rule 212 Noticing

33. Comment: Does the additional information required for Rule 212 noticing apply if the rule limits the risk at the school is one in one million?

Response: No, the additional information requirement applies only to schools where the risk posed by a new or relocated facility exceeds one in one million. Furthermore, it only applies when the public notice is triggered by requirements in Rule 212.

34. Comment: Section (f) of Proposed Rule 1401.1 requires that a new facility with risk greater than one in one million must comply with Rule 212. When this is triggered, the owner/operators of the facility must distribute notices to each address within ¼ mile radius of their proposed project if their operations pose a risk of greater than one in one million. We question why this is necessary when posing such risk is not allowed under Proposed Rule 1401.1.

Response: Proposed Rule 1401.1 does not trigger public notice. Subdivision (f) of Proposed Rule 1401.1, requiring additional information, is only applicable when a public notice is currently required by Rule 212. The school trigger for Rule 212 is an increase in emissions from a new, relocated, or modified permit unit. If the notice is triggered by Rule 212, the distribution of notices is to every address within 1,000 feet of the outer boundary of the facility and every parent or guardian of students in schools within ¼ mile of the outer boundary of the facility. The additional information requirement says that if a public notice is required by Rule 212 and the facility produces a greater than one in one million cancer risk at any school within 1,000 feet, then the notice must include the risk at any school with greater than one in one million risk. For example, a relocated facility choosing the "no net increase" option might have a cancer risk of greater than one in one million at a school. Although it is unlikely that a new facility may cause greater than one in one million cancer risk at a

school, this requirement assures dissemination of this information to the public.

Other Comments

35. Comment: Are the gasoline outlets which have been completely rebuilt over the past few years to comply with new higher air pollutions standards considered "new" for the purpose of the proposed rule?

Response: No, for Proposed Rule 1401.1 these would be considered a modification to an existing facility because the original equipment was in operation prior to the date of adoption of Proposed Rule 1401.1. However, any new or relocated gasoline station would be subject to Proposed Rule 1401.1.

36. Comment: The rule basically says that once a facility is subject to Proposed Rule 1401.1, they must always meet the risk requirements. Is that true if the school goes away?

Response: No, if there is no school, there would be nowhere to calculate the risk. The source would have to comply with the requirements of Rule 1401, and all other applicable rules.

37. Comment: Cumulative impacts are not addressed by the proposed rule. This is a matter of environmental justice where low income communities are impacted most. The student body completely changes over a period of three to five years. How are students notified after they have left the school?

Response: The proposed rule only applies to toxic emissions from new and relocated facilities near schools. It addresses their impacts on children in attendance at the nearby school. The toxic impacts from the facility are assessed at the time the permit is issued and public notices, if required, are sent to parents and guardians of children currently in attendance. The term "cumulative impacts" as used in the Cumulative Impacts White Paper refers to the total impacts of all emission sources on a given receptor area, such as a school or residence, rather than the accumulated effects on one individual over their lifetime of exposure to various pollutants in many different locations. The rule does not contain a provision to notify children after they have left the school.

38. Comment: Why are pre-schools not protected by the rule?

Response: The definition of schools in the proposed rule includes only kindergarten through 12^{th} grade. The definition is consistent with the definition in the State Health and Safety Code and is consistent with other AQMD toxics

rules. The 2003 Cumulative Impacts white paper proposed a rule with more stringent requirements for new and relocated facilities near schools and possibly other sensitive receptors. The current proposal is for K-12 schools only. Including pre-schools would require additional analysis based on the location of all pre-schools and would impact a larger area than the proposed rule. Analysis for pre-schools and other sensitive receptors has not been done for the proposed rule. Future rule development may include other types of sensitive receptors, such as medical facilities, senior care facilities, etc..

39. Comment: Rule 219 should be added to the exemptions to make the rule applicability more clear.

Response: This has been done. The risk requirements apply only to permitted equipment. The definitions for the terms "facility-wide cancer risk," "facility-wide acute hazard index," and "facility-wide chronic hazard index" in subdivision (c) of the proposed rule include the phrase "due to all toxic air contaminants emitted from all equipment requiring a written permit to operate at the facility" to further clarify that only equipment requiring a written permit is included in the calculation for facility-wide risk. Equipment listed in the exemptions subdivision (h) is excluded from the calculation.

40. Comment: Some moderating language should be included to clarify that change of ownership, where there is no increase in risk, is not subject to the proposed rule.

Response: Merely changing the ownership of a facility does not trigger risk analysis. If all operating parameters remain the same, there is no change in the risk analysis. However, subsequent modifications or change of conditions for facilities subject to the proposed rule are subject to the risk requirements regardless of change of ownership and these may require additional risk analysis.

41. Comment: Will a change of ownership of a facility impacted by the proposed rule trigger a requirement to prepare a HRA to establish a baseline picture?

Response: Change of ownership for an "existing facility" as defined by the proposed rule will not ever be subject to the proposed rule as stated in subdivision (b). A change of ownership for a facility that was determined to be subject to Proposed Rule 1401.1 (new or relocated facility), however, must always meet the risk requirements of the rule. Typically a change of ownership would not affect the risk level and therefore no new risk analysis would be required. If the new owner makes equipment or operational changes, however, these would be subject to risk analysis.

42. Comment: School districts should be prohibited from locating in close proximity to existing toxic-emitting businesses.

Response: Proposed Rule 1401.1 does not apply to existing facilities, only new or relocated facilities. However, several state and AQMD documents address the siting of new schools near existing toxic-emitting facilities. They include CalEPA and CARB's "Air Quality and Land Use Handbook: A Community Health Perspective", OEHHA and CalEPA's "Guidance for School Site Risk Assessment Pursuant to Health and Safety Code Section 901(f) Guidance for Assessing Exposures and Health Risks at Existing and Proposed School Sites", and AQMD's "Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning." These documents make recommendations for the siting of new schools and state law requires schools to analyze when they site near toxic sources (CEQA 21151.8).

43. Comment: We request the following modifications to the rule:

1. The Governing Board reaffirm that this regulation affects only new sources and is not, and will not be, a precedent for future regulations governing the siting and operation of existing or rebuilt sources.
2. The rule should only apply to parcels of land which have been purchased by the permit (facility) applicant after the rule goes into effect. In this way, a facility owner who has already purchased a parcel of land for a specific purpose will not have its value arbitrarily reduced.
3. Use accepted OEEHA exposure guidelines when evaluating risk at schools. These guidelines already have substantial health protective assumptions built in. There is no need for the District to make new and unneeded exposure assumptions in the name of "risk management".
4. Modify the distance criterion to 100 meters or 300 feet for gasoline dispensing facilities that must meet the one in one million risk criterion. This will be more consistent with ARB's Land Use Guidance and with the District's modeling which shows that risks fall off substantially by this distance.

Response: The issues concerning distance and risk assessment have been addressed in the appropriate sections above. Rulemaking for existing sources near schools will be an entirely new project and staff recognizes the vast differences in circumstances for facilities making siting decisions as opposed to already existing businesses.

The issue of parcels of land that have been leased or purchased prior to adoption of the proposed rule has been addressed by an existing facility

definition. The addition states a facility is existing if applications for Permit to Construct/Operate have been submitted and deemed complete within 90 days following the date of adoption. The definition of new facility excludes existing and relocated facilities. Applications can be, and are required to be, submitted prior to construction or installation of equipment and planning departments are required to send applicants for building permits to the AQMD for a clearance letter prior to issuing a building permit. For projects which require long term planning, it is in the best interest of the planners to check with the local school district to determine if any potential school sites are nearby, as part of its due diligence prior to siting the project.

44. Comment: Emergency internal combustion engines are technically not exempt from Regulation XIII by the action of Rule 1304. They are only exempt from modeling and offset requirements but must comply with other requirements such as BACT. It might be more correct to say "Emergency internal combustion engines that are ***exempt from modeling and offset requirements*** under Rule 1304."

Response: Proposed Rule 1401.1 exempts "Emergency internal combustion engines that are exempted under Rule 1304". This is the same language used in the exemption for emergency engines in current Rule 1401 and, for the two toxic rules it only exempts this category of engines from the risk requirements in the rules.

45. Comment: Please clarify that risk assessments for facilities with Rule 1470 engines should exclude those engines from the risk analysis.

Response: The draft rule language now reflects this. In order to make this more clear, Subdivision (h) Exemptions, now reads, "The following equipment is exempt from inclusion in the facility-wide cancer risk, facility-wide acute hazard index, and facility-wide chronic hazard index."

46. Comment: The discussion on Key Issues from the May 6, 2005 pre-hearing should reflect the California Small Business Alliance concerns.

Response: These issues have been included in the Executive Summary of the staff report and addressed in the response to comments as well as being discussed at the Working Group meetings and various committee and advisory group meetings. The first two issues concerned the need for the proposed rule and the contribution of stationary sources and other sources. See Comments 1 through 5 for a discussion of these issues. The next two comments suggested relocating drop off points at schools and improving indoor air at schools as an alternative to the proposed rule. These suggestions are addressed in Comment 6. The final point was regarding

the potential impact and financial burden of Proposed Rule 1401.1 on existing sources. Although Proposed Rule 1401.1 does not apply to existing sources, please refer to Comments 13 regarding existing businesses that relocated and Comments 16 through 22 regarding socioeconomic and land use issues.

47. Comment: Most existing facilities and the vast majority of relocations will not be subject to the requirements of the proposed rule according to staff and hence modifications can take place within the limits of Regulation XIII and Rules 1401 and 1402. In the applicability section of the rule it might be clearer to say that a modification to an existing facility is not subject to the rule unless it is an impacted relocated facility.

Response: Facilities that are "existing facilities" according to the proposed rule definition are never subject to Rule 1401.1, even for modifications or change of ownership. Subdivision (g) says that modifications at "relocated facilities" (as defined in the proposed rule) are always subject to the requirements of the rule if the facility is initially determined to be subject to the rule.

48. Comment: AQMD should not exempt any equipment that emits toxics. AQMD should have more stringent requirements for all diesel engines in the Basin and should require all diesel engines to stop emitting particulates that impact school children.

and

The exemption for engines regulated under Rule 1470 should be removed because these engines could still cause a significant amount of emissions near schools.

Response: Proposed Rule 1401.1 is based on a risk level of one in one million cancer risk. This level is considered an acceptable de minimus level for toxic emissions for the proposed rule as well as other AQMD toxic rules. Rule 1470 - Requirements for Stationary Diesel-Fueled Internal Combustion Engines and Other Compression Ignition Engines places more stringent requirements on diesel engines near schools. Rule 1470 places limits on the particulate emissions from all diesel engines which reduces the toxics emitted as diesel particulate. In addition, the rule limits the hours of operation for emergency diesel engines near schools to hours when students are not in attendance and limits the total number of hours per year that the engines may be operated. In general, emergency engines at schools are not allowed to operate for non-emergency purposes during school hours on days when school is in session or when there is a school-sponsored event, thus protecting students from any significant risk.

49. Comment: We support expanding the definition of "existing school" to include any school site where the Lead Agency notifies the AQMD of a certified CEQA document.

Response: The risk assessment requirements for PR1401.1 include existing schools and sites where construction has begun for new schools and the AQMD has been notified.

50. Comment: The exemptions for "various locations" equipment and experiment research equipment for less than one year at a site should be removed because this equipment could be potentially large sources of emissions that could be deleted from the assessment of risk.

Response: These types of equipment are subject to the risk requirements of Rule 1401which would preclude large amounts of toxic emissions at the time of initial permitting. Furthermore, limiting the amount of time this equipment is allowed to remain near the school provides protection. If the equipment is located near the school for more than one year, it would be subject to the risk limits of Proposed Rule 1401.1 and would then be included in the calculation of toxic risk at the schools.

APPENDIX B

CONCEPT PAPER: More Stringent Risk Requirements for New or Relocated Facilities Near Schools

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Concept Paper:

More Stringent Risk Requirements for New or Relocated Facilities Near Schools

November 2004

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List of Acronyms

AER – Annual Emission Reporting
AQMP – Air Quality Management Plan
HI – Hazard Index
MATES – Multiple Air Toxics Exposure Study
MICR – Maximum Individual Cancer Risk
OEHHA – Office of Environmental Health Hazard Assessment
RECLAIM – Regional Clean Air Incentives Market
TAC – Toxic Air Contaminant
T-BACT – Best Available Retrofit Technology for Toxics

EXECUTIVE SUMMARY

Background

At the September 5, 2003 South Coast Air Quality Management District (AQMD) meeting, staff presented a white paper titled "Potential Control of Strategies to Address Cumulative Impacts from Air Pollution". One of the strategies, Strategy 2, was a proposal to look into amending Rule 1401 – New Source Review of Toxic Air Contaminants in order to make more stringent risk requirements for new or relocated facilities siting near existing schools and possibly other sensitive receptors. Staff committed to a two-step hearing process to first identify key policy issues and seek direction prior to the rule adoption hearing. In maintaining the intent of a two-step process, the AQMD staff has prepared the attached concept paper as part of the first step. The concept paper presents possible alternatives for addressing Strategy 2 and includes data analysis done thus far to identify sources and determine impacts of more stringent risk requirements for new or relocated facilities locating near existing schools. Following public review, staff will return to the Governing Board for a pre-hearing to present recommendations and to seek further guidance on key policy issues.

This concept paper provides an update to the Board on the status of Strategy 2, provides an overview of the data analysis, identifies key issues, and looks at possible alternatives for implementation. Staff proposes a 60-day public review and comment period to allow additional input from the public before returning to the Board to make further recommendations on rule development.

Objective

The purpose of Strategy 2 is to address cumulative toxics impacts near existing schools and possibly other sensitive receptors. The concept is to make more stringent requirements for new and relocated toxic sources locating near existing schools, thereby minimizing the impact of toxic emissions to school children. Because existing schools within the District are already subject to the combined effects of mobile and area sources as well as permitted facilities nearby, Strategy 2 proposes stricter guidelines for additional risk from any new source. Initially the project will address existing schools.

Conclusion from Data Analysis

Data analysis was conducted using historical permit data to determine the impacts of more stringent risk requirements. Over the past six years the AQMD has received permit applications from approximately 101 new or relocated toxic-emitting facilities locating near schools. Based on the data analysis, less than 20 new or relocated facilities locating near schools had toxic emissions resulting in a cancer risk between 1- and 10-in-one million. Currently, Rule 1401 requires new equipment to have a cancer risk of less than one-in-one-million or, if equipped with Best Available Control Technology for Toxics (T-BACT), the cancer risk must be less than 10-in-one million.

Of note from the data analysis, sixteen new service stations were located near schools within the past six years. This represents less than 2% of all new service stations permitted in that timeframe. Three of the 16 service stations near schools had a facility risk level below one-in-one-million cancer risk and the other 13 had risk levels between one-in-one million and 10-in-one-million, the limit allowed by Rule 1401 because they are equipped with T-BACT. In addition to the service stations, two facilities with only one permit had a risk of between 1- and 10-in-one million, a perchloroethylene dry cleaner and a municipal water district with an internal combustion engine. Also, one facility with three spray booths has permit conditions which could potentially allow up to a three-in-one-million facility cancer risk. Rule 1401 is an equipment-based rule, so each individual piece of equipment must meet the risk level as compared to Rule 1402 which establishes a facility-wide risk limit. Therefore, out of the 101 new facilities near schools with potential toxic emissions, all had facility-wide cancer risk levels below one-in-one million with the exception of 16 facilities which had a 1- to 10-in-one-million risk. All equipment met the risk requirements of current Rule 1401.

Conclusion and Recommendation

Strategy 2 has been discussed at several public meetings to allow public input on implementation. In order to allow more focused public comment, staff has prepared this concept paper including data analysis done thus far to identify sources and determine impacts of more stringent risk requirements for new or relocated facilities near existing schools. Originally, the White Paper suggested amending Rule 1401 to make more stringent risk requirements for new and relocated facilities locating near existing schools. Rule 1401, however, is an equipment-based rule and applies to modifications of existing equipment as well as new and relocated equipment. Staff recommends developing a new facility-wide rule, Proposed Rule 1401.1, to address toxic risk from new and relocated facilities locating within 1,000 feet of existing schools. The new proposed rule will require a facility-wide cancer risk level of one-in-one million and acute and chronic hazard indices of 1.0 at the school. Risk analysis would be based on permitted equipment only and proposed exemptions include portable/temporary equipment, diesel-fueled engines subject to Rule 1470, and soil remediation operations. These emission sources are temporary or operate limited hours under stringent controls and requirements. The initial rule would apply only to schools (kindergarten through 12th grade), but could later be expanded to include other sensitive receptors. Key issues, as rulemaking is pursued, are receptor distance, risk levels, and exemptions.

Following a 60-day public review and comment period for the concept paper, staff will return to the Governing Board to highlight policy issues for further refinement of staff's proposal during rulemaking.

Introduction

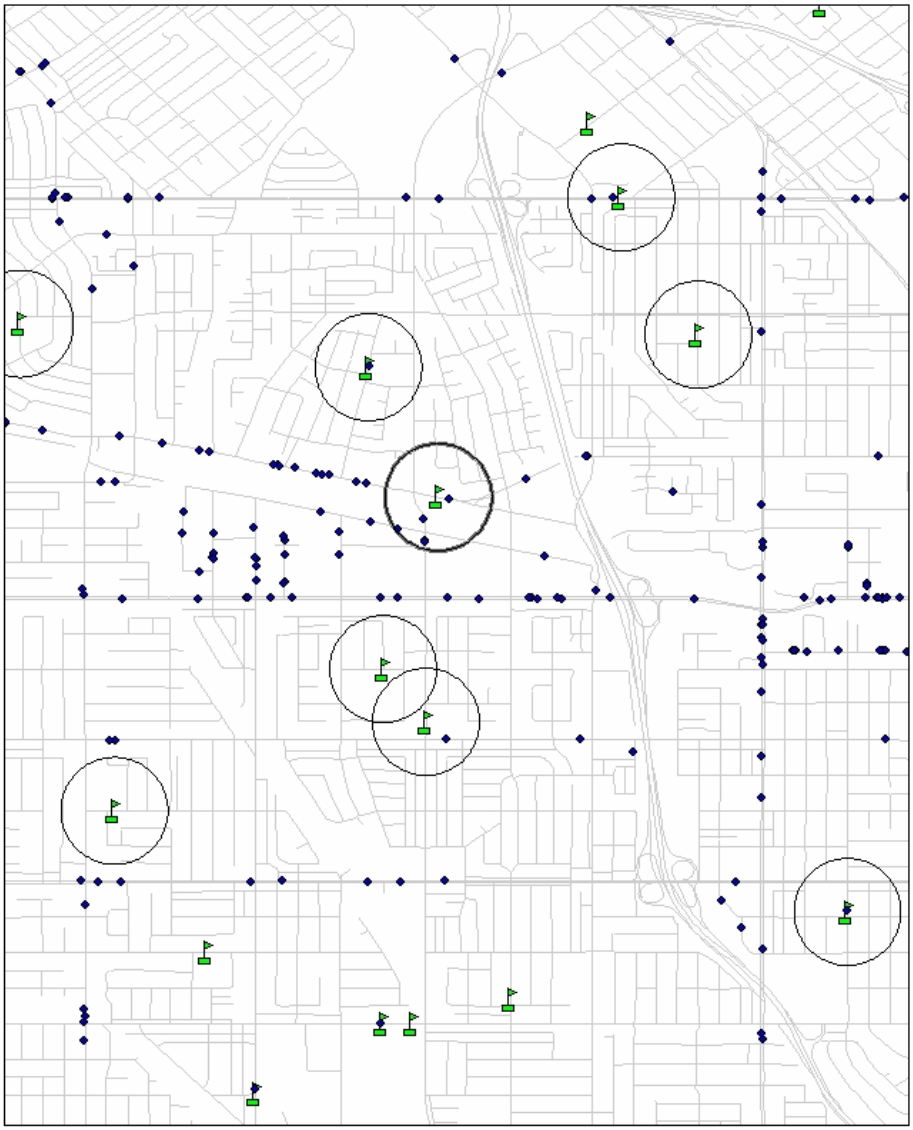
This concept paper addresses Strategy 2 from the White Paper titled "Potential Control Strategies to Address Cumulative Impacts from Air Pollution" (August 2003). The original idea for Strategy 2 was to study amending Rule 1401 to establish more stringent risk limits for new and relocated facilities emitting air toxics located near existing schools and possibly other sensitive receptors. This paper includes the data analysis, identifies key issues, and looks at alternatives to address Strategy 2.

Background

At its January 2003 meeting, the Governing Board directed staff to return to the Board with a white paper on regulatory and policy options for addressing cumulative impacts from air pollution. On September 5, 2003 staff presented a white paper, "Potential Control Strategies to Address Cumulative Impacts from Air Pollution" (White Paper), to the Governing Board. The White Paper contained recommendations for numerous strategies to reduce cumulative impacts. One of the strategies, Strategy 2, was a proposal to look into amending Rule 1401 – New Source Review of Toxic Air Contaminants to make the risk requirements more stringent for new or relocated facilities near existing schools and possibly other sensitive receptors. At the September 2003 meeting of the AQMD Governing Board, staff committed to a two-step hearing process to first identify key policy issues and seek direction prior to the rule adoption hearing. In maintaining the intent of a two-step process, the AQMD staff has prepared the attached concept paper as part of the first step. Following a 60-day review and comment period for the concept paper, staff will return to the Governing Board for a pre-hearing to highlight key policy issues for further refinement if staff's proposal during rule development.

Based on the second Multiple Air Toxics Exposure Study (MATES II) (1998-1999 data), average cancer risk for residents of the South Coast Air Basin is estimated to be 1,400 in-one million from all sources. Most of the regional risk is due to mobile sources such as diesel engines and gasoline powered vehicles. However, stationary sources with toxic emissions also contribute to the localized risk and many of these facilities are located near schools. For example, recent rule development for Rule 1469 – Hexavalent Chromium Emissions from Chrome Plating and Chromic Acid Anodizing Operations identified more than ten chrome plating facilities located within 1,000 feet of an existing school. Types of facilities in the District that may be located in close proximity to schools and emit toxics include service stations, dry cleaners, and coating operations. Figure 1 is a map that shows existing school and AQMD facilities with any permit or emitting a toxic air contaminant (TAC), for schools within a small area in the District and provides one example of possible air quality impacts. The schools are represented by buildings with flags and facilities are represented by dots. The circles indicate a perimeter of 1,000 feet around the schools. Adding new sources of toxic emissions near existing schools adds to the cumulative toxic risk from existing mobile and stationary sources.

Figure 1
Map of AQMD Permitted Facilities and Proximity to Schools



Dots represent AQMD permitted facilities.
Flags represent schools.
Circles represent 1,000 foot perimeter around the schools.

Rule 1401

AQMD Rule 1401 – New Source Review of Toxic Air Contaminants specifies limits for cancer and non-cancer health risks for new, modified, or relocated equipment which emits toxic air contaminants. The rule applies to the increase in risk from any new, modified, or relocated permit unit and requires that the following criteria are met before an AQMD permit is issued:

1. Increase in maximum individual cancer risk (MICR) is less than or equal to one-in-one million or 10-in-one million if Best Available Control Technology for Toxics is used;
2. Increase in Cancer Burden is less than or equal to 0.5;
3. Increase in Chronic Hazard Index is less than or equal to 1.0; and
4. Increase in Acute Hazard Index is less than or equal to 1.0.

The current rule requirements do not distinguish between facilities near sensitive receptors and other types of receptors.

There are several exemptions listed in Rule 1401. Some exemptions concern situations such as change of ownership, modification with no increase in risk, and functionally identical replacement. Others are for certain types of equipment or processes such as emergency internal combustion engines.

The analysis for Rule 1401 is for individual pieces of equipment, not the entire facility. It concerns only the increase in emissions from the new permit unit. Rule 1402 – Control of Toxic Air Contaminants from Existing Sources, on the other hand, applies to facilities and considers the risk from all sources at a facility.

Rule 212

Based on California Health and Safety Code §4.2301.6, which requires a public notice 30 days prior to final action for permit to construct or modify a source which emits hazardous air emissions and is located within 1,000 feet of a school, AQMD Rule 212 – Standards for Approving Permits requires public notification for any new, modified, or relocated source under specific circumstances. Rule 212 requires notification: 1) where there is an increase in emissions of any criteria pollutant and the source is located within 1,000 feet of a school; or 2) where onsite emissions increase exceeds any daily maximum listed in Rule 212(g); or 3) where the maximum individual cancer risk (MICR), based on Rule 1401, exceeds one-in-one million (1×10^{-6}) for a source with more than one permitted equipment, or facilities under RECLAIM or Title V, regardless of the number of equipment, unless the applicant can show the total facility-wide MICR is below 10-in-one million (10×10^{-6}). For facilities under Regulations XX and XXX with a single permitted equipment, the MICR level must not exceed 10-in-one million (10×10^{-6}). The circulation and distribution of the notifications must meet the criteria in Rule 212 which follows the state requirements.

Public Process

During development of the 2003 White Paper, a Cumulative Impacts Working Group met several times to provide input on the strategies. The Rule 1401 Working Group met on December 11, 2003 to discuss Strategy 2. Some of the topics of discussion were the effective distance from the

school for risk analysis, duration of exposure, economic and development issues, non-permitted sources of pollutants, new schools building erected in industrial areas, and identification of other sensitive receptors. A second meeting of that Working Group was held on October 26, 2004.

Objective

The purpose of Strategy 2 is to address cumulative toxics impacts near existing schools and possibly other sensitive receptors. The concept is to make more stringent requirements for new and relocated toxic sources locating near existing schools, thereby minimizing the impact of toxic emissions to school children. Because existing schools within the District are already subject to the combined effects of mobile and area sources as well as permitted facilities nearby, Strategy 2 proposes stricter guidelines for additional risk from any new source. The effects of nearby permitted facilities and sources such as freeways can be seen in Figure 1. Much of the risk near existing schools comes from mobile sources, and equipment which does not require a written permit. Initially the project will address existing schools and may later be expanded to address other sensitive receptors, such as medical facilities and commercial day care centers.

Currently, applications for permits for new or relocated equipment within 1,000 feet of a school are subject to review under Rule 1401 – New Source Review of Toxic Air Contaminants if the equipment emits toxic air contaminants. Rule 1401 requires that cancer risk for any new or relocated equipment shall be less than one-in-one million or, if equipped with T-BACT, the risk shall be less than 10-in-one million. Rule 1401 also addresses non-cancer health impacts and requires chronic and acute hazard indices (HI) to be less than 1.0. Under Strategy 2 these thresholds would be made more stringent, and, therefore, more health-protective for children and staff at existing schools. Data was analyzed in order to more fully understand the impacts of any rule change making risk requirements more stringent for new or relocated facilities emitting toxic air contaminants near schools.

Data Analysis

Permitting data for the past six years, fourth quarter 1998 through third quarter 2004, was studied to assess the magnitude and types of new and modified facilities emitting TACs that are located near schools. Based on the AQMD's permitting database, during the six-year period, AQMD staff issued more than 12,000 identification numbers to new or relocated facilities. Of those, 316 facilities were located within 1,000 feet of an existing school representing 487 applications. The data analysis excluded emergency diesel internal combustion engines which are exempt from Rule 1401 but subject to Rule 1470 – Requirements for Stationary Diesel-fueled Internal Combustion and Other Compression Ignition Engines. It also excluded portable equipment which is located at one site for less than one year. The applications were analyzed to determine if the equipment had the potential for toxic emissions. For the equipment identified as potentially having toxic emissions, individual engineering analyses were looked at to determine what, if any, toxics were emitted and what risk level was calculated based on those emissions. Data analysis also included calculating facility-wide health risk. The risk levels for both cancer and non-cancer health impacts were analyzed, however, in almost all cases the overriding factor was the cancer risk. Therefore, most of the following discussion centers around cancer risk levels.

Based on the data and permit evaluations, the number of new or relocated facilities in the past six years with any toxic emissions was 101, or about 17 facilities per year. Source categories included spray booths, service stations, air stripping, flexographic and lithographic printing, natural gas combustion equipment, landfill gas, methanol storage, miscellaneous materials storage, open tanks, and ovens. Figure 2 shows the distribution of all new and relocated facilities and those near schools during the past six years. All the equipment at the facilities was below the equipment-based risk levels established in Rule 1401. Rule 1401 requires new equipment to have a cancer risk of less than one-in-one-million or, if equipped with Best Available Control Technology for Toxics (T-BACT), the cancer risk must be less than ten-in-one million. Figure 3 shows the distribution of the 101 facilities with potential toxic emissions.

Figure 2
New Facilities near Schools with Potential Toxic Emissions

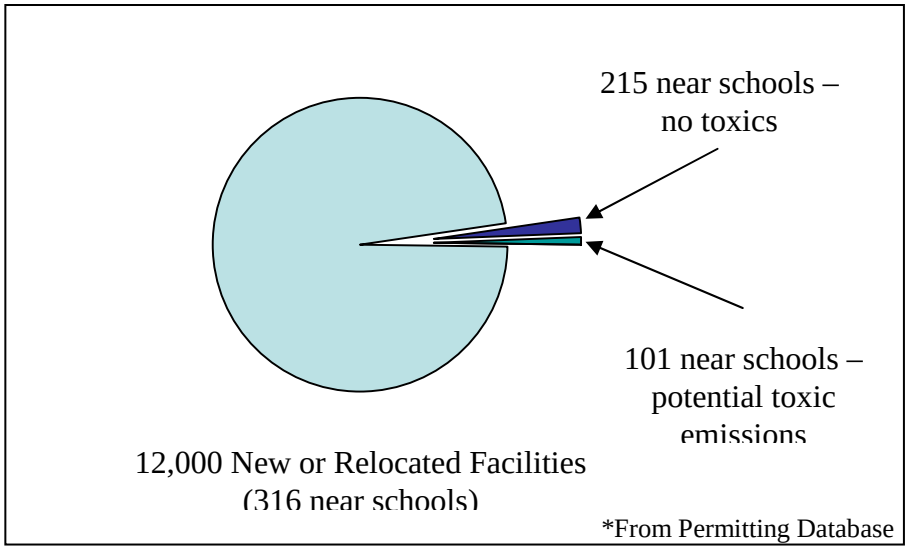
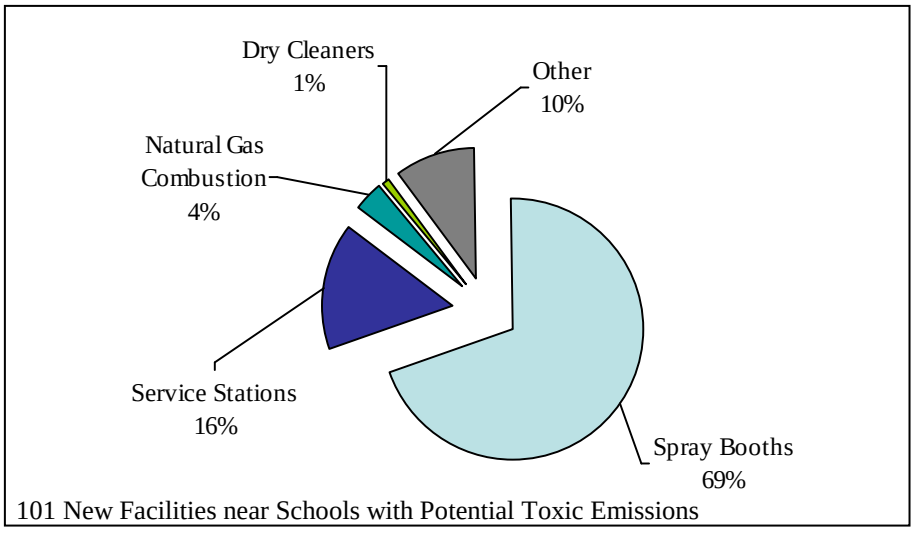


Figure 3
New and Relocated Facilities near Schools with Potential Toxic Emissions



Service Stations

Toxic risk from service stations is primarily due to benzene, a component of gasoline. Benzene is a carcinogen and also has chronic and acute non-cancer health impacts. Over the six year timeframe, there were more than 900 new service stations that received permits. Of these 900, there were 16 new service stations near schools which is less than two percent of the 900 stations. Three of the 16 had a facility cancer risk level below one-in-one-million and the other 13 had cancer risk levels between one-in-one-million and 10-in-one-million, the limit allowed by Rule 1401 because they were equipped with T-BACT at the time.

Dry Cleaners

Currently, most dry cleaners use a solvent called perchloroethylene to clean clothes. However, pursuant to Rule 1421 – Control of Perchloroethylene Emissions from Dry Cleaning Systems, on or after January 1, 2003 new facilities can no longer use perchloroethylene dry cleaning systems. Perchloroethylene is a carcinogen and also has chronic and acute non-cancer health impacts. One new perchloroethylene drycleaner located near a school during the past six years and prior to January 1, 2003. The facility has a permit limit for perchloroethylene usage that precludes their risk from being greater than 10-in-one-million. The dry cleaning equipment was equipped with primary and secondary controls which is T-BACT.

Natural Gas Combustion Equipment

Toxic emissions are produced by the combustion of natural gas. These include formaldehyde, naphthalene, and polycyclic aromatic hydrocarbons (PAHs). All three compounds are carcinogens and formaldehyde and naphthalene have non-cancer health impacts as well. During the past six years, four new facilities with natural gas fired engines and a boiler were located near schools. Three of the facilities had facility cancer risk levels of less than one-in-one million. The other, a municipal water district with a natural gas fired internal combustion engine, has a facility cancer risk of 1.8-in-one-million. The engine is equipped with selective catalytic reduction which is T-BACT.

Spray Booths

Over 65 percent of the applications with potential toxic emissions were spray booths. Staff reviewed engineering evaluations, permitting practices, permit conditions, and consulted with permitting engineers familiar with the equipment to determine typical toxic emissions from the spray booths. Typically this equipment has some toxic emissions, but cancer risk is below one-in-one million and hazard indices are below 1.0. When there is a potential for cancer risk to exceed one-in-one million most spray booth owners elect to accept a permit condition limiting the use of coatings such that they do not exceed one-in-one million cancer risk rather than put on costly control equipment to ensure compliance with Rule 1401. None of the spray booths had T-BACT controls indicating all were below one-in-one million cancer risk.

Spray booths are used to control particulate emissions from painting and coating operations such as autobody, furniture manufacture, and powder coating operations. Some coatings and cleanup

materials used in these operations contain toxic compounds including toluene, xylene, formaldehyde, glycol ethers, and numerous others. These compounds have cancer and/or non-cancer health impacts. Over the past six years, 70 new facilities with spray booths and the potential for toxic emissions located near existing schools. Of the 70 facilities, 69 have a facility cancer risk of less than one-in-one million. One facility with three spray booths has permit conditions for coatings usage which could potentially allow three-in-one million facility cancer risk. Rule 1401 is an equipment-based rule, so each equipment must meet the risk level. Rule 1402 contains the requirements for facility risk.

Other

Over the past six years there were 10 other new or relocated facilities that sited near existing schools. They include printers, coating operations, groundwater cleanup, and methanol storage and dispensing. The toxic risk is due to various compounds in the inks and coatings, tetrachloroethylene contamination in groundwater, and methanol. All ten of these facilities had a cancer risk less than one-in-one million.

Summary of Findings

Of the 316 new and relocated facilities sited near schools in the past six years, 16 had a facility cancer risk of between 1- and 10-in-one million. 13 of the 16 are service stations. Ninety-eight percent of new service stations are not sited near schools. One facility with a facility cancer risk of between 1- and 10-in-one million was a drycleaner, however after January 1, 2003 no new dry cleaning facility may use perchloroethylene.

Other Consideration

In December 2003 the Office of Environmental Health Hazard Assessment (OEHHA) released their new *Hot Spots Analysis and Reporting Program Guidelines.* Currently the AQMD's guidelines for determining health risks are being changed to reflect the new methods for assessing health risk. The new method results in approximately 30 percent higher risk values for worker receptors (school teachers and staff in this case) and only slightly higher values for residential receptors. Typically the risk value for residential receptors is higher than that for worker receptors and is, therefore, the driving factor when making permitting decisions. These changes in the guidelines will make the risk values more stringent for worker receptors even in the absence of a new rule for facilities near schools. Since a new rule for facilities near schools would likely be based on the health risk at schools this revision to the health risk guidelines is expected to have minimal, if any, impact on future siting of new facilities near schools.

Conclusion and Recommendation

Originally Strategy 2 in the White Paper was to look into amending Rule 1401 to make the risk requirements more stringent for new or relocated facilities near existing schools. Rule 1401 is an equipment-based rule whereas the new requirements would be facility-wide. Rule 1401 also applies to modifications of equipment at existing facilities as well as new and relocated equipment. It is possible to amend Rule 1401, however the basic applicability and purpose of the

rule would need to be revised and facility requirements would need to be added to what is currently an equipment-based rule.

Staff recommends developing a new facility-wide rule, Proposed Rule (PR) 1401.1 that would apply only to totally new or relocated facilities locating within 1,000 feet of an existing school. It would be more health-protective for schools already subject to surrounding toxic sources. This approach is more straight-forward in that a new or relocated facility locating near a school would comply with PR 1401.l instead of Rule 1401. The new rule would specify facility limits for maximum individual cancer risk, and non-cancer acute and chronic hazard indices from the new or relocated facilities using the toxic air contaminants listed in Table I of Rule 1401. Staff recommends development of a new rule, Proposed Rule 1401.1 applicable to new and relocated schools locating near existing schools. Staff recommends a facility-specific rule with a cancer risk level of one-in-one million and acute and chronic hazard indices of 1.0 at the school. The risk analysis would be based on permitted equipment only. Proposed exemptions include portable/temporary equipment, diesel-fueled emergency backup engines regulated under Rule 1470 - Requirements for Stationary Diesel-fueled Internal Combustion and Other Compression Ignition Engines, and soil remediation operations subject to Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil. The initial rule would apply only to schools (kindergarten through 12^{th} grade). Key issues for rule development include receptor distance, risk levels, and exemptions. The concept paper includes data analysis done thus far to identify sources and determine impacts of more stringent risk requirements for new or relocated facilities locating near existing schools.

Staff recommends a 60-day public review and comment period for the concept paper. Following the public review, staff will return to the Governing Board for a pre-hearing to highlight policy issues for further refinement of staff's proposal during rule development.

References

Multiple Air Toxics Exposure Study MATES – II (AQMD, March 2000).

Potential Control Strategies to Address Cumulative Impacts from Air Pollution (AQMD, August 2003).

Rule 212 – Standards for Approving Permits and Issuing Public Notice (AQMD, amended November 14, 1997).

Rule 1166 – VOC emissions from Decontamination of Soil (AQMD, May 11, 2001).

Rule 1401 – New Source Review of Toxic Air Contaminants (AQMD, amended May 2, 2003).

Rule 1402 – Control of Toxic Air Contaminants from Existing Sources (AQMD, amended March 17, 2000).

Rule 1421 – Control of Perchloroethylene Emissions from Dry Cleaning Systems (Amended December 6, 2002).

Rule 1470 – Requirements for Stationary Diesel-fueled Internal Combustion and Other Compression Ignition Engines (AQMD, adopted April 2, 2004).